American MILK REVIEW

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CIRCULATION OVER 14,500 MILK PLANTS

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(See Story On Page 4)

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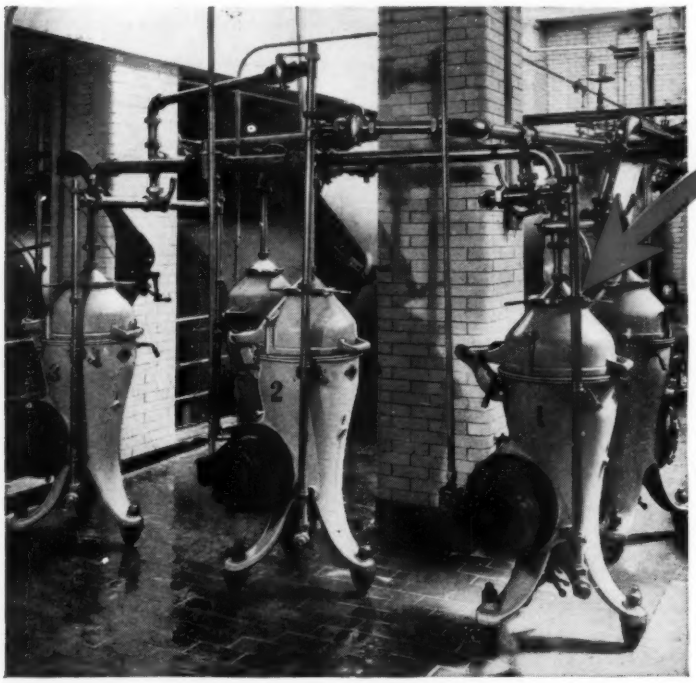

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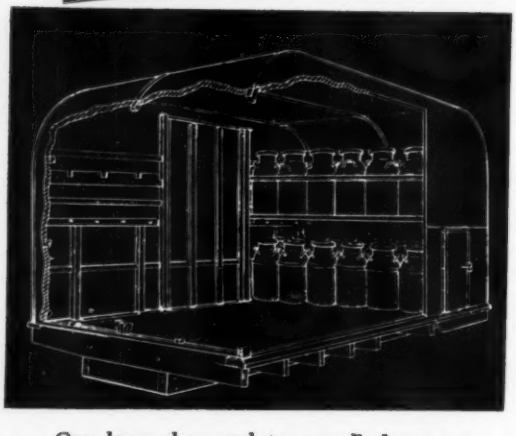

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American MILK REVIEW

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AFTOSA-MEXICAN TRAGEDY

A Story of the Foot and Mouth Disease

By Norman Myrick

A THIRD of a century has elapsed since the great epidemic of Foot and Mouth disease in 1914 invaded twenty-two States and presented the livestock industry of this country with a bill for more than nine million dollars. Two other outbreaks of the scourge, one in 1922 and another in 1929 have struck the cattle of the United States since that bloody nightmare early in the century. 172,000 hogs, goats, sheep and cattle were slaughtered in an effort to eradicate the disease. The lessons of those grim battles serve to accentuate the bitter struggle going on at the present time in Mexico. Foamy muzzles and blistered udders have already sent upward of a quarter million Mexican cattle to the slaughter pits.

The foot and mouth disease, sometimes referred to as the hoof and mouth disease, has been known to husbandmen since antiquity. There is hardly a country in the world that has not suffered the ravages of the malady. In many countries, particularly in Europe a chronic condition exists characterized by sporadic outbreaks of extreme violence. The disease turned Germany into a shambles in the latter part of the 19th century and reached a virulence unequaled in 1911. Destruction estimated at $119,000,000 was visited on the German cattle industry while Switzerland, half the size of the State of Maine, suffered damages calculated to be $70,000,000.

The United States Department of Agriculture describes the sickness as "an acute, highly communicable disease confined to cloven footed animals and characterized by an eruption of vesicles or blisters on the mucous membrane of the mouth and the skin between the toes and above the hoofs." Horses have been found immune to the disease although dogs, cats, and rabbits have been

infected artificially. Foot and mouth disease is propagated by an extremely minute, exceedingly tough virus. Experiments have shown that it will pass through standard germ proof filters and it has been known to exist outside the body of an animal for as long as 345 days, although under ordinary circumstances 30 to 60 days is the average length of life. An outstanding feature of the disease is the terrifying rapidity with which it spreads. Highly communicable, it may be carried by humans as well as cattle or hogs.

Cattle afflicted with Foot and Mouth disease generally recover although mortality has run as high as fifty percent in some outbreaks. The recovery process is slow and the effects of the disease linger for a considerable period. Loss of weight with reduction in milk are common results and in the case of dairy cattle the animals are not worth much as producers until they experience a new lactation period. Because of the rapidity with which it may be disseminated, and the necessity of a thorough eradication in order to insure elimination the common practice in the United States has been the slaughter of all infected and exposed animals and the thorough cleaning and disinfection of the premises where they were located. That such a program can be effective is demonstrated by the success of the 1922 campaign, but that the task is hard is borne out by the countless slaughter pits strung across the country from Wisconsin to Maine.

The present outbreak in Mexico was diagnosed in December of 1946. The grave threat that the Mexican infection held for beef and dairy cattle in the United States prompted authorities to undertake a joint campaign with the Mexican government for the control and eradication of the disease from

North American soil. A commission headed by Lic. Oscar Flores of Mexico and Dr. M. S. Shahan of the United States is in charge of the program that has slaughtered more than 225,000 cattle thus far in the campaign of extermination. According to present plans more than 2,000,000 cattle must fall before the "sanitary rifles" of government control crews before the disease can be eradicated. Early victim of the disease probably the finest herd of dairy cattle in Mexico. This purebred herd owned by the Fernandez Rubio brothers of Queretaro was recently destroyed. Two hundred and seventy animals were slaughtered.

The disease apparently entered Mexico through one of the seaport cities. With characteristic speed it spread across the State of Vera Cruz into adjoining areas until it embraced 334 municipalities or counties distributed among 15 States. The infection is not spread evenly throughout this area, how-

ever, but consists of one massive area of infection involving 12 States in the vicinity of Vera Cruz and several small cores or "pockets" scattered over other parts of the countryside. Since the outbreak in Mexico no cases of foot-and-mouth disease have appeared in the United States, nor have any appeared in the northern States of Mexico. The nearest affected herd is about 350 miles from the border.

The strategy of the high command in carrying out their charge is one of quarantine for the infected area, elimination of the disease in outlying "pockets" and then concentration on the main area of infection. Total eradication has been accomplished in some of the secondary areas and latest reports describe the work as approaching the stage where the major area of infection will be subjected to a final "squeeze".

Early in the campaign the commission took a definite stand on the matter of using vaccine. The commission's position was that vaccine at best provides only temporary immunity, hardly more than two or three weeks and even that immunity is compromised by the fact that several types of the virus exist each of which requires a specific vaccine. There was no time for questionable experimentations in the opinion of the commission. The only safe course was to pursue the proven methods of slaughter and disinfection.

Modern methods and equipment have been brought to bear on the disease in the gigantic undertaking. Power shovels, bulldozers, jeeps, trucks and even ambulances have been pressed into service. Mechanization has enabled the rate of slaughter to be stepped up by providing a rapid means of disposal and allowing personnel to be easily moved from one area to another. One hundred and thirty carloads of equipment have been received in Mexico City or are known to be in Mexico and en route to the capital. The majority is U. S. Army surplus.

Indemnity payments to Mexican farmers are assumed jointly by the United States and Mexico. Appraisals are made on the basis of the animals weight, quality, and condition while in the case of dairy cattle the present production of the animal is taken into consideration. Indemnity payments average about $49.00 although there is a substantial variation in payments according to localities. Some areas where superior types of cattle prevail have averaged $60.00 as compared to areas with poor quality stock that have averaged $25.00 a head.

The primitive character of much of the Mexican hinterland has complicated the problem of extermination. The principal source of power for a large percentage of Mexican farmers is oxen. The elimination of draft oxen in the infected area, while necessary to the success of the campaign would seriously disrupt the economy of nearly 6,000,000 people dependent upon the agricultural production of the area for sustenance. To meet the problem tractors from the United States and disease free areas in Mexico were used to replace draft oxen slaughtered in the course of the program. By the middle of July 14,500 mules had been distributed among Mexican farmers who applied the indemnity payments received for their slaughtered cattle against the purchase of the mules. The difference is absorbed by an agency of the Mexican government with funds realized from salvaged operations at Mexican slaughter-houses.

Another problem that was and is the source of considerable difficulty in the conduct of operations is linguistic difference that prevails throughout the infected areas. Many of the farmers are Indians who speak neither English nor Spanish but use an Indian dialect limited to their particular area. Illiteracy, too, adds to the difficulty of explaining the necessity of slaughter operations to Mexicans farmers. Nevertheless, wholehearted support of the program by Mexican officials and livestock organizations has enabled the commission to overcome the geographical and social hurdles inherent in a disease eradication program. Local leaders have been used to explain the necessity for the campaign and the benefits that will follow the results of the eradication program.

The wild nature of the Mexican countryside with its extensive unpopulated ranges and poor roads have made it necessary to resort to plane surveys in order to be sure that all cattle have been eradicated from a particular section. Dr. H. E. Shaulis, a United States Veterinarian operating in the vicinity of Guanajuato has pointed out that the cooperation of the Mexican people in facilitating the work of the commission is illustrated by the results of these investigations. The survey disclosed no animals in or around any of the 100 Indian villages of the area where eradication work had been conducted. Two stray cattle on mountain pastures were the only animals sighted where formerly large numbers of cattle had grazed. These strays will be hunted down and buried.

The Mexican authorities have undertaken an extensive campaign to inform citizens of the seriousness of the Foot and Mouth disease. Because of the illiteracy factor word of mouth communication and pictures have been found most effective in spreading the word.

(Please Turn to Page 49)

EDITORIALLY SPEAKING . . .

Tell The Public Why

"WHY DONT YOU do something about the price of milk?" That is a question we have heard over and over again during the last few months. A Captain in the United States Navy, a public relations executive, a college professor, a housewife all expressed themselves with no little vehemence on the subjct.

It is true that griping about increased prices is one of the nation's favorite diversions, a characteristic of the high priced twenties, if you will remember. In the case of the fluid milk industry, however, the griping has been accompanied by a decline in sales that can be attributed only to the increased price. The unfortunate part of this situation is that, from a nutrition view-point, reducing the family's milk consumption is penny-wise and pound foolish. From a marketing angle curtailing milk consumption is a false economy because milk is still one of the cheapest foods.

The fluid milk industry has a great opportunity here that it cannot afford to miss. The increase in price can readily be explained and in such a manner as to reflect credit upon the milk handler. A recent survey by the Milk Industry Foundation emphasized the fact that while wages have gone up 70 percent since 1940 the milk handlers share of the milk price has increased by only fourteen percent. Whereas all foods have risen by 53 percent milk has increased by only thirty-five percent and still remains far below the all foods price level.

Those of us associated with the milk industry know these things, know why milk prices have increased and how the increase has been distributed. But the consumer does not know. The consumer does not know and will not know until someone tells him.

It is high time that milk handlers told the public why milk has increased in price and how it compares with other foods. It is high time and what's more it is a very good story.

•

Standards of Quality

IS THERE A FINAL standard of quality? We hope not. We hope that the Industry will never be satisfied with its products, will always seek new standards, new definitions of excellence.

A healthy indication of such an attitude comes from a variety of sources. July saw the establishment of the Dairy Products Improvement Institute. Objectives of the new organization are "to foster the improvement of quality milk and cream used in processing milk and cream". The American Bulk Condensed Milk Association is working out new standards of quality and identity for its product. An article on Sealtest in a recent issue of this magazine points out "The core of the Sealtest system is the quality control supervisor located in each Sealtest processing plant." A note in the July 2 issue of the *Dairy Record* advises that the Wisconsin State senate voted to provide $10,100 for the grading, inspection, and quality improvement of Swiss Cheese.

These are promising activities yet much remains to be done. One of the weakest links in the entire chain of production from a sanitary and quality point of view is in the cow stable. Great strides have been made in barn sanitation, it is true, but the fact of the matter is that most of our dairy barns in the United States are better exponents of pasteurization than quality milk at the source.

Still another facet of the quality problem lies with the consumer's handling of finished dairy products. It makes little difference how clean the dairy barn or how painstaking the plant operation, if through careless handling on the consumer's part the product spoils the industry either directly or indirectly feels the impact of consumer displeasure.

Not more than a month ago we were served milk in a pleasant upstate New York restaurant. Out of four glasses of milk brought to the table three had "turned". The point of this discussion is simply that the quality chain is a long one reaching from the dairy cow to the housewife or restaurant or hotel that serves the finished product. Intelligence and industry are needed along the whole line.

•

Highway To Disaster

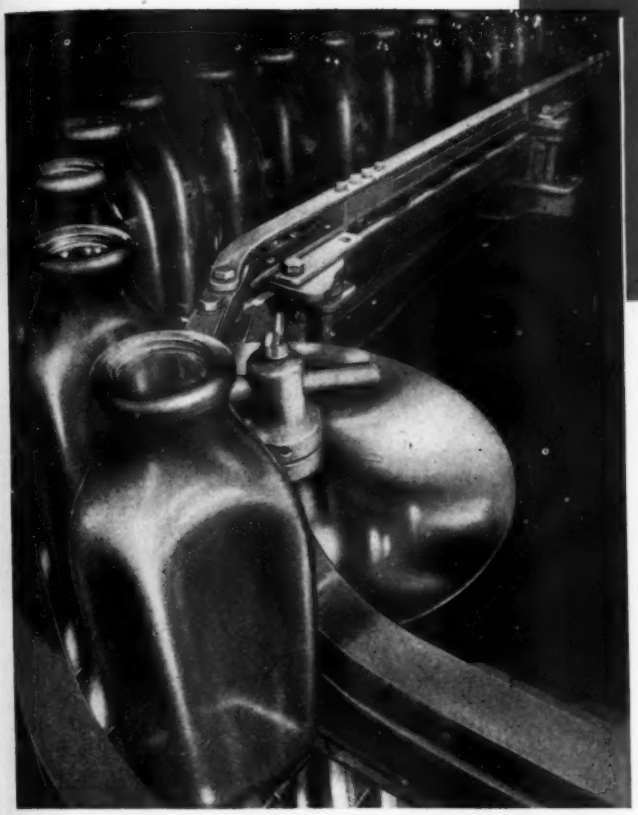
IT HAS BECOME fashionable of late to speak glibly of the coming war with Russia. Because spectacular reports increase newspaper circulation or gain a wider audience for the radio commentator the sensational possibilities of war talk are fully exploited by the news carriers of the nation. It is an old technique and a dangerous one. A half century ago two newspapers ushered in the era of modern journalism by so inflaming public opinion that a needless war was fought with the Spanish Empire *after Spain had agreed to the demands of an American ultimatum.*

There is no denying that the seeds of war have been sown. The basic requirements for war, two major powers in conflict over fundamental issues, does exist. There is no denying the maddening tactics used by the Russians in the United Nations which, in American eyes particularly, appear to be aimed at thwarting efforts toward establishing universal peace on anything but Russian terms. There is no denying the attempt of Russia to extend her influence beyond her borders or to "bore from within". The question is, do these facts add up to war?

Your editor is terribly afraid that they do. The American public has never made a serious effort to understand Russia any more than Russians have made or have had the opportunity of understanding forces that make us what we are. What little progress was made during the brief era of wary good feeling during the war has disappeared under the wave of dislike and distrust that has followed in the wake of Russian action in the peace settlements. The American mind has reached the state where it is *ready to accept the inevitability of a war.*

Perhaps war is inevitable. Perhaps we are inextricably bound up in an evolutionary process that moves forward without regard for our efforts at alteration.

We do not pretend to know the answer. All we do know is that the present trends lead in only one direction with one cataclysmic end. There is no possibility of peace in "holding the Red line" or "holding the Democratic line" whichever the case may be. These are the futile policies of which war is merely the logical extension. The basis for peace can only be found when Russians as well as Americans have free access to accurate information and each group is willing to understand the forces that motivate the other.



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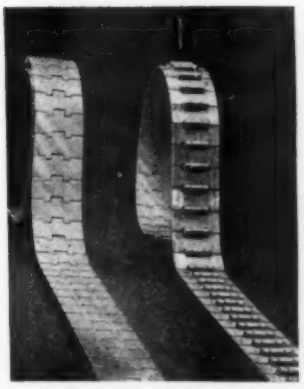

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RENAISSANCE IN CLEANING EQUIPMENT

Fourteen New Devices, Designed and Developed by John Perry of Sealtest, Inc., Effect a Variety of Economies and Produce Improved Cleaning

The value of money expended for thought and study is apparent in the series of cleaning devices developed by John Perry, Assistant to the President of Sealtest, Inc. The dollars and cents benefit to be derived from efficient and economical cleaning equipment is of immense practical worth but of even greater importance is the dynamic thought that here is the exemplification of progress.

●

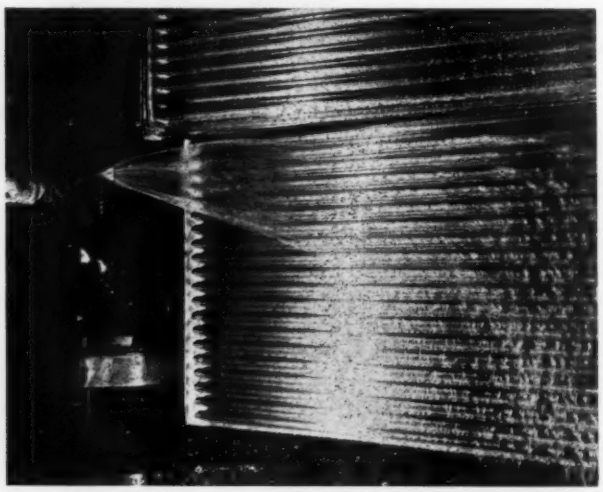
CLEANLINESS MAY BE NEXT to Godliness but in the dairy plant it is a lot more expensive and a state that constantly challenges attainment. The ease with which milk and milk products develop off flavors due to unclean equipment plus the increased bacteria counts that inevitably follow present an unending challenge to the conduct of a dairy enterprise. There was a happy time long ago when soap and hot water were considered adequate in cleaning operations. But those blissful, ignorant days have vanished before the reality of modern tests and standards. Careful investigation has shown that in some modern milk plants as high as 20 percent of the total man hours expended in plant operation are used in the business of cleaning.

Cleaning in itself is something of a paradox. On the one hand it is a necessary function in order to deliver a quality product that justifies the price while on the other hand it requires the expenditure of large sums of money for labor and materials as well as subjecting the equipment cleaned to *wearing* action. Caught on the horns of this dilemma the dairy plant manager can only call upon the gods for deliverence and try to do the cleaning job in the most efficient and economical manner possible.

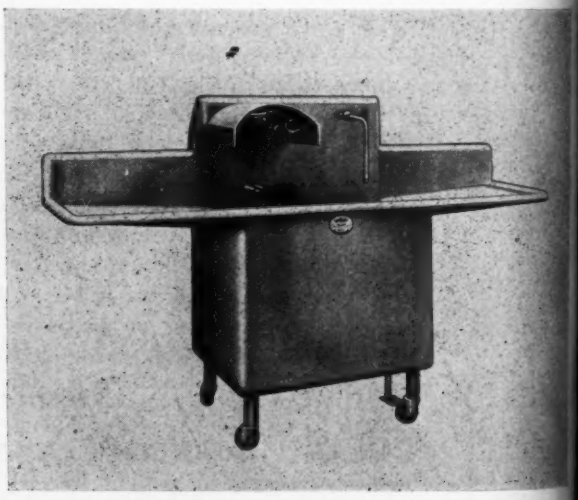
Not long ago Sealtest decided the cleaning operation urgently needed improvement and upon investigation concluded that steps needed to be taken in the direction of better cleaning methods and equipment. John Perry, assistant to the president of Sealtest, Inc., and a dairy plant man of many years standing, was given the assignment of investigating the problem and devising means for improving the situation.

Describing the work that he has been doing Mr. Perry said "Except for improvements in cleaning compounds, practically no advancements had been made in cleaning techniques for many years. The three mainstays have been the pail, the brush, and the unwieldy, inefficient, free running hose. We tackled the problem with five objectives in mind: (1) To obtain better cleaning, (2) to achieve a neater and more orderly operation, (3) to make the job a better one for the workman, (4) to effect economies and to reduce wear and tear on equipment and plant and (5) to develop improved and more sanitary cleaning equipment. As the first step toward attaining these objectives a study of cleaning methods was carried on in several representative plants of National Dairy Products Corporation. This study was begun early in 1943 and indicated that better facilities and equipment were definitely needed."

One of the first problems that Mr. Perry tackled was the question of water. The desirability of a constant supply of hot water is an obvious requirement for good cleaning operations. Yet the fact that water with too great a temperature causes milk stone and water with too low a temperature fails to remove fat, demanded the determination of an optimum temperature. According to the studies made by Mr. Perry, water at 115 degrees F. gives good results. Mr. Perry found that some plants were equipped with hot water systems and had both hot and cold water at the hose stations. In other plants cold water and high pressure steam were piped direct to the hose stations.



The shut-off valve with nozzle delivering a "blade" of water is shown above. The large surface area of the cooler that is covered by the stream is well illustrated here. Water can be readily controlled by means of the shut-off valve that is a part of the nozzle. The nozzle is coated with Neoprene as a protection against marring.



The sanitary fittings cleaner is a compact, movable unit that enables workmen to do a better cleaning job in less time than with old equipment. Power driven brushes extending over the sink compartment are fed cleaning solution from perforated pipe located under protecting hood. Rinsing pipe and control pedal are on the left.

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In order to eliminate the necessity of having two water systems and at the same time supply water of the desired temperature to hose stations Mr. Perry utilized a hot water generator of the reservoir type. A "tempering valve" was used to blend hot water from the generator with cold water and supply water of 115 degrees F. to the hose stations. There are a number of good generators of the type he used on the market. When it is available, exhaust steam can be satisfactorily and economically employed to produce water of the desired temperature.

All told Mr. Perry developed some fourteen devices of a mechanical nature that make cleaning a better job for the man and secure better cleaning results for the plant. One of the most spectacular of these devices is a quick action shut-off valve with a specialized nozzle that may be attached to the end of a hose. The shut-off valve gives the workman control of the flow of water at all times and eliminates the extravagant waste of water that prevails when ordinary equipment is employed. The special nozzle gives a blade effect to the stream of water. The "blade" form allows the water to rinse down without splattering and provides for a much greater coverage of the surface to be cleaned. The nozzle and valve are encased in a resilient, tough coating that is securely attached to the metal. The coating not only protects equipment from scratches or dents that would result from metal coming in contact with metal but also serves as a protection for the valve and nozzle.

The shut-off valve works most effectively when water is delivered under low pressure. Mr. Perry says that reducing valves in the vicinity of the hose stations will give the desired pressure which generally has been found to be between 15 and 25 lbs. per square inch.

A subsequent development in this connection has been the design of a set of nozzles that may be used to produce water streams of varying forms. Furthermore, the use of the shut-off valve and the nozzles makes it possible to use a light weight hose. A half inch hose was found to be entirely adequate for the job to be done. This hose, coated with Neoprene is a light flexible instrument that is a vast improvement over the clumsy three-quarter inch dairy hose commonly used. The Neoprene coating is resistant to lactic acid and some of the hose tested is still in good condition after more than two years of intensive use. The light weight and general handiness of the hose eliminates much of the drudgery involved in cleaning operations with a resulting improvement in the quality of work turned in. Men appear to take better care of the lightweight hose, just why, no one seems to know, yet it is a fact. Plants in which the light weight hoses are used report that workmen seldom leave the hoses lying on the floor but more or less automatically coil them on the racks provided at the hose stations.

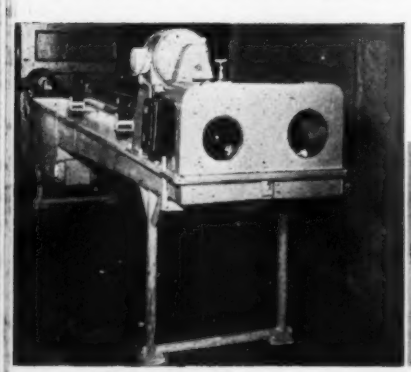
Some startling economies have been effected by these refinements of the cleaning operation. One plant reported a saving of more than six hundred dollars in fuel costs alone over a period of six months as a result of using about six of the shut-off valves, the blade nozzle and the hot water generator. Gains also were made in the general neatness of the premises as well as in the dryness of the plant floor. Primarily due to the quick action of the shut-off valve that enables the operator to control the flow of water to a fine degree it has been possible to dispense with the traditional rubbers and aprons. The dollars and cents saving becomes even more marked in those plants that find it necessary to "soften" the cleaning water. At the present time shut-off valves of this design are in use by approximately 25 National Dairy Corporation plants.

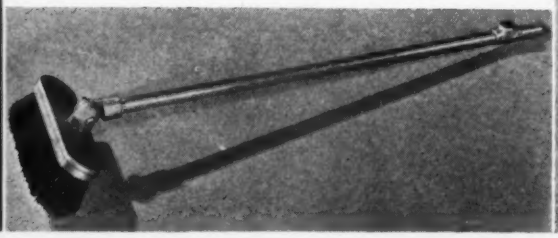
Specialized hose station with light weight hose has had marked effect on cleaning procedures. The hose station contains a strainer, pressure reducing valve and pressure gauge.

The problem of using a sterilizing solution was handled in a manner somewhat similar to the problem of water. A stationary chlorine solution tank was provided with appropriate valves so that the cleaning fluid could be piped to the point where it was needed. A specially designed spray gun was developed. In this gun the sterilizing solution and air are mixed within the gun resulting in the delivery of a spray in the proper form to permit complete sterilization of the object to be cleaned.

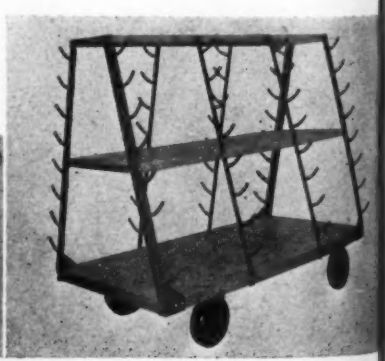
Sanitary pipe with variations in length and diameter called for substantial study in order to produce a satisfactory cleaning device. As developed by Mr. Perry the sanitary pipe cleaner will scrub the inside and outside of pipe at the same time, the brushes meanwhile are supplied with a constant stream of cleaning solution. The machine provides for both scrubbing and rinsing. The scrubbing portion consists of a brush mounted on a long shaft that is housed in a tube through which the cleaning solution is fed to the brush. A set of three brushes, so arranged that no portion of the external surface of the pipe escapes scrubbing are incorporated in the device for outside cleaning. Each of these parts of the scrubbing element are driven by separate motors; the brush tipped shaft for interior cleaning by a low horse power motor that causes the brush to revolve and also

(Please Turn to Page 42)





The Sanitary pipe cleaner solution fed brush, and wheeled pipe carrier are shown here. Sanitary pipes are cleaned by brush assembly seen through housing on the right. Brush in center has push button control of cleaning solution. Pipe rack arms are coated with Neoprene to prevent metal from coming in contact with metal.



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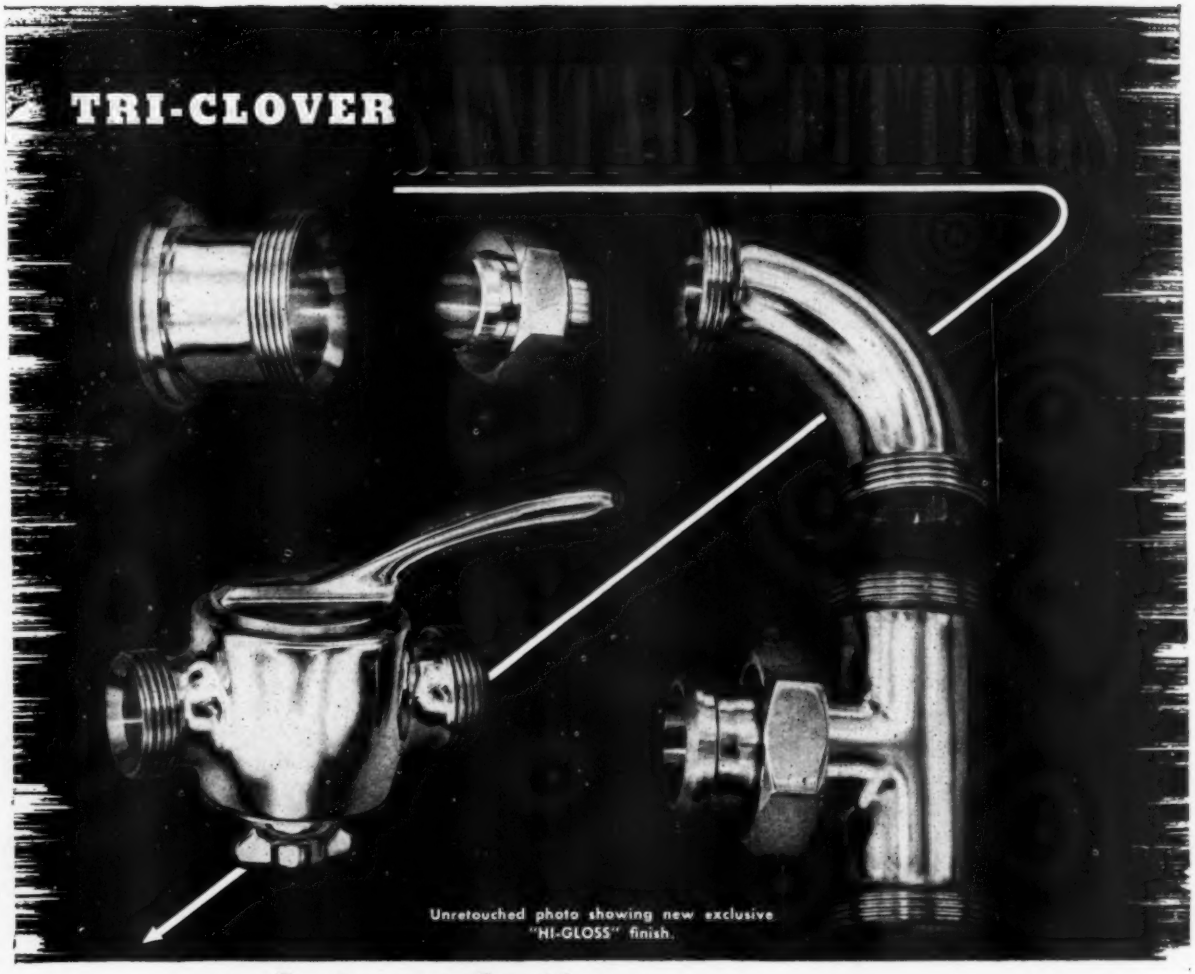

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Backed by over 25 years of intensive research and specialization, TRI-CLOVER stainless steel and Tri-Alloy Sanitary Fittings . . . Valves . . . Pumps . . . Tubing and Specialties represent the very highest quality. The careful, precision fabrication methods and strict adherence to sanitary standards responsible for this quality are both costly and time-consuming . . . but the superior, safe, long-term service obtained in thousands of actual installations prove beyond doubt that these TRI-CLOVER quality-control methods are well worth while . . . *Look for the Clover!*

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TRI-CLOVER Stainless Steel and Tri-Alloy Fittings designated and accepted as meeting the 3-A Sanitary Standards by the appropriate Committees of the International Association of Milk Sanitarians, U. S. Public Health Service, and Dairy Industry Committee:

2-C Bend	10-C Valve
2-F Bend	13-H Hex Nut
2-K Bend	14-R Ferrule
2-P Bend	15-R Ferrule
7 Tee	16-A Cap
7-A Tee	30-F Angle Valve
7-B Tee	31-15 Reducer
9 Cross	32-15 Reducer
10-BF Valve	33-F Can Filler

See your TRI-CLOVER JOBBER for complete details.

Dean Milk Plant Impressive

Modern Materials Give Striking Effect in Illinois Firm Building

Design Features Production Efficiency for 200,000 Qt. Operation

The modern dairy plant is a beautiful thing. There is an aesthetic as well as utilitarian appeal. The new structure erected by the Dean Milk Company, with its splendid use of glass blocks, its efficient layout, and its striking elevation is a stirring symbol of the Industry.

THE LARGEST building in one of the smallest towns in Illinois (population 675) is an ultra-modern dairy plant. It is the new home of a trend in milk handling started shortly before the war in the Chicago area by the late Sam E. Dean.

Adjacent to many of Illinois' larger dairy farms, the new plant of the Dean Milk Company is a model of design and efficiency. Building and equipment are geared to the top speed demanded by Dean's intensive merchandising in the Windy City area 50 miles away.

The Huntley plant has a capacity for receiving and bottling 200,0000 quarts daily. Because it was designed to package quarts exclusively for the Chicago retail trade, the building and its equipment are streamlined into a neat, economical operation.

The building is functional and as modern as tomorrow. Its architect, Victor L. Charn, employed the latest construction techniques and materials to combine efficiency with esthetic appeal.

Basically the plant is a combination of structural steel frame and reinforced concrete. Floors are of concrete slab construction, finished in quarry tile. Exterior walls are of face brick with tile finish inside which is easily cleaned and kept sanitary.

Instead of conventional windows the architect used large panels of glass block with small window inserts to provide vision and ventilation. The block, installed with mortar like other masonry materials, flood the interior with evenly diffused daylight and give the plant added smart appearances.

To give controlled daylight to all working sections of the plant Mr. Charn designed the glass block panels to form an almost continuous belt around both floors of the building. The panels are 8 ft. 8 inches high. Window-size panels line the weigh dock and the receiving and shipping rooms at the rear.

The plant is designed to route milk and materials in straight lines during processing to avoid lost motion in backtracing. Receipts come in over the weigh dock and are pumped through clarifiers and a plate cooler into raw-milk storage tanks on the second floor. Five 6,000-gallon tanks are directly above the receiving dock.

Homogenizers and pasteurizers are also on the second floor, in a direct line with the storage department. After processing and cooling, the milk goes into 1,500-gallon pasteurized storage tanks which feed filling machines by gravity. Employee facilities—the cafeteria, locker rooms, etc.—are grouped together on the second floor.

MODEL PLANT. Dean Milk Company's newest unit may serve as a model for future dairies. Low maintenance costs, high-speed operations and architectural appeal are among its features. The building measures 129x73 feet, contains more than 18,000 square feet on two floors.

EASILY CLEANED. Everything in the Huntley Dairy is easy to maintain. Floors and walls of tile can be hosed down. Glass Block panels get the same treatment. Window inserts in the panels are crank-operated projecting type which provide ventilation and permits workers to see out.

BRIGHT AND CLEAN. The second-floor storage department of the Dean Dairy is immaculate and well lighted. Softly diffused daylight floods through the glass block panels which require no shading. Almost the entire wall area thus transmits light while preventing heat losses and gains inherent in ordinary windows.

The three high-speed filling lines are on the ground floor. Nearby are emergency cold-storage facilities, the laboratory and offices. Partitions of plate glass and glass block separate the various units while transmitting daylight and permitting vision where desired.

Automatic conveyors for bottles and cases keep hand labor and handling to the minimum. Refrigerated trailer trucks which haul the packaged milk to market are loaded directly from filling lines by telescoping conveyors. These extend to the front end of the truck and are retracted into the building as loading proceeds.

While providing for profitably high-speed operation, the new Dean plant is arranged for economical maintenance. Operating sections are constructed so they can be quickly and easily hosed down. Even the glass-block panels get this treatment.

Besides presenting no maintenance problems, requiring neither paint nor frequent washing, glass block performs several additional functions. Insulux glass block has an insulating factor in controlling heat loss equal to that of an eight-inch brick wall. This reduces the condensation which attacks window frames of wood or steel and prevents excessive heat gain as well. Savings in cooling and heating expenses are the result.

Sanitation, service and savings are three watchwords of the entire Dean operaton. By receiving and bottling in the country the Huntley plant serves all three. An added dividend is the merchandising advantage of "country-fresh" milk which has been profitable to Dean Milk Company and its customers.

Sam E. Dean, Jr., President of the company, sums it up this way: "Providing better milk at a lower price is not alone a moral obligation, but an opportunity for public service as well." The new Huntley plant lends action to his words.

●

RANCO HOUSE ORGAN HONORED

The *Contact*, recently established employee house organ of Ranco Inc., manufacturers of refrigeration controls, received a third place award at the annual meeting of the National Advertising Agency Network, held recently in French Lick, Indiana.

AGAIN STERILINE LEADS

WITH THIS NEW 50 Gallon PASTEURIZER

Every detail of design, construction, and materials in the new 50 Gallon Steriline Pasteurizer matches the high standards of larger Steriline equipment, known and used the nation over

The "50" is designed for small batch pasteurization in large plants or for regular daily production use in smaller plants.

Stainless steel throughout.

One piece spun cover with insulation* optional. Special latch holds cover in open position.

Agitator operates off center at an angle.

Standard single speed 2 blade agitator with two speed * coupling optional, as illustrated.

Air space heater.

1" insulation of fibre glass.

Stainless steel cold water spray ring with hot water heating* attachment optional.

Direct vapor steam heating.

One piece inverted dish bottom.

Sanitary adjustable legs with ball feet.

Available as Extras

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Lifetime Equipment for

A Lifetime of Good Service

STERILINE PASTEURIZERS

*THERE'S ONE NEAR YOU

Coatings: Counterattack On Corrosion

by Stephen K. Urner

THE OLD MAXIM of seafaring men that "a ship is as good as its paint" may well be applied to the dairy industry. But, whereas the principal foe of an ocean going vessel is the constant corrosive action of the salt air, in a dairy plant the problem is complicated by the necessity of guarding against contamination. These twin gremlins, contamination and corrosion, are considered by many to be the major cause of the grey hairs and violent nightmares that have become the heraldic symbols of a plant manager.

Modern industry with its wide use of caustic and acid bearing substances has created a demand for protective coatings. Not only must these substances be moved or held as the situation demands but they must be handled in such a manner that their purity is preserved and their corrosive properties prevented from acting on expensive equipment. Many well known firms such the the Bakelite Corporation, New Jersey Zinc Company, American Pipe and Construction Company, Atlas Powder Company, various paint concerns, and many others are engaged in either the development and/or the production of coatings designed to withstand corrosion and prevent contamination.

Most of the surfaces with which we deal in the ordinary course of events have a coating of some form. In general these coatings may be divided into two groups; (1) the common protective coatings such as paints and enamels; (2) highly specialized resin baked finishes. (This discussion will deal primarily with the latter type of coating.)

The bewildering variety of products that utilize protective coatings range from hunting knives to battleships, from tank cars to milk cans. The food industries in general and the flavor extract people, distillers, and dairy products handlers in particular find in protective coatings the answers to many of their problems.

An ordinary dairy plant presents an extremely difficult problem to the sanitary engineer. Bottle washing machines for example representing investments of five to fifteen thousand dollars are subjected to a constant series of vicious corrosive attacks. The machines must be resistant to any contents that remain in bottles when they begin their journey through the cleaning operation. In the washer proper the constant attack of 3 to 5 percent hot caustic solution and the subsequent wash water are relentless in their action on the surface wi which they come in contact. During the mixing, separatin filling, and capping operation surfaces of plant and equipme are exposed to a variety of chemical actions from phosphor acid, carbonic acid, citric acid, sugars, syrups, and flavori materials. The constant washing with alkaline cleaners a sterilizing solutions which is standard procedure in any dai plant reduces the bacteria count but increases the corrosio problem. One of the main culprits in this battle of corrosio is lactic acid. Both steel and concrete fall victims to its cor sive action. Many operators that have been confronted wi disintegrating floors have learned that lactic acid was t cause. The answer to these problems is found in the use corrosion resistance materials and coatings.

Most of the coatings on the present day market are ba on resins either natural or synthetic. For many years t oil considered best by paint and varnish makers was tung Chinawood oil. This oil was imported from China and t Far East. With the rise of Japanese domination in the Paci and the outbreak of hostilities this important commerce w interrupted and coating manufacturers were forced to rely "soft" domestic oils. American chemists, however, had alread developed a wide variety of synthetic resins which would compensate for the different characteristics of these "soft" oi

The Bakelite Corporation, perhaps the nation's chief ma ufacturer of synethic resins offers four major types of resi which are of particular value to the protective coating manu facturer. Each of these types has distinctive properties Phenolic resins impart a protective quality to a coating whic is used to preserve the integrity of finishes. Varnishes, paint and enamels are the most common class of products th employ this type. A wide use for the group is found i lining tank cars. C-9 resins offer good color retention, flex bility retention, durability, excellent adhesion, they are wate and solvent resistant, and remarkably mar-proof. They a used extensively as the base for coatings applied to metal wood, brick, masonry, textiles, and paper. A third group resins are known as dispersion resins. Coatings based on th product present a satin smooth finish and offer exceptiona drying speeds, speeds that may be measured in minutes i stead of hours. Their principal use comes as coatings fo aircraft, industrial machinery, and household appliances. Th final group is called vinylite, vinyl chloride-acetate. Th group is highly resistant to water and many chemicals, has high flexibility, and a good color stability. They are prob ably the best of all bases for coatings that are to be used i dairy plants. Their excellent resistance to high humidity an moisture plus their ability to withstand certain chemical re

Pasteurizing jackets protected from corrosion by Americoat finishes based on the tough and durable VINYLITE resins.

DAMROW ROTARY CAN WASHERS

...Offer You *Remarkable* Efficiency in Small Floor Space!

You can wash up to 6 cans per minute in 62" diameter floor space — with a Damrow Rotary Can Washer . . . and wash anything that will stand on end, including large neck gallon milk bottles, milk pails, ice cream containers and carrying cans.

Even more important . . . the compact, low cost Damrow Rotaries give you the same extraordinary efficiency of the famous Damrow Straightline Washers. They provide six to eight thorough stages, with FORCED COLD AIR DRYING and many exclusive Damrow features such as: solid steam plates, safety "No-Jam" clutch, Unique Geneva movement drive, and many others.

For highest washing efficiency in smallest floor space — for cleaner, sterile, sweeter, drier cans that protect your milk quality . . . be SURE to get DAMROW Rotary Can Washers.

Here's a DAMROW ROTARY to Fit Your Need . . .

Type	Diameter	Cans per Minute
H	62"	6
J	52"	4
K	62"	4
RP (Hand Operated)	56"	2½

Clip this Coupon for Details . . .

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Please send me literature and prices on space-saving, efficient Damrow Rotary Can Washers. Capacity ..... cans and covers per minute.

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Light reflection shows smooth continuous surface on this interior. Lithcote used here is based on BAKELITE resins.

actions makes them extremely valuable where milk handling operations are carried on. Their chief use comes as exterior coating for plant equipment such as pasteurizers and holding tanks. They do not stand high temperatures.

One of the most important factors in determining the value of a protective coating is the manner in which it dries. The chemistry of the drying process is a simple and necessary things to understand if the significance of modern protective coating is to be grasped. Generally speaking a coating dries by three different methods: (1) by evaporation of a volatile solvent (A volatile solvent is one that evaporates quickly.) (2) by the chemical reaction known as oxidization, in which oxygen from the air gradually combines chemically with the unsaturated constituents of the drying oil portion of the coating, resulting in a film setting to useful hardness a common example of this type of drying is the hard scum that forms on the surface of a linseed oil paint left in an exposed can. (3) A chemical reaction called polymerization. This is an exceedingly interesting occurrence wherein a chemical linkage takes place between small molecular units to form much larger molecules. The advantage of this type of drying lies in the fact that the brittleness that occurs under oxidization drying is eliminated and the coating retains its resiliancy and does not crack or shatter on aging.

The application of protective coatings in the dairy industry appears to be on the increase. Milk tank cars and trucks formerly lined with glass are now lined with stainless steel or steel with a protective resin baked coating.. Holding tanks, pasteurizers, cheese mixers, bottling machines, washing machines, and other pieces of equipment employ protective coatings both internally and externally Moreover, many of the smaller items in present day plants such as bottle hoods, paper containers, and the interiors of milk cans are protected against corrosion or contamination by some similar system.

Milk bottle hoods made from paper treated with VINYLITE resin have been developed. This treatment results in a closure that's non-toxic, non-porous and waterproof, and one which uses the thermoplastic properties of VINYLITE resin in sealing. The hood in use affords effective protection against exposure of the bottle's pouring rims to handling, melting ice, snow, and rain.

Modern coatings have been developed to such a high degree of efficiency that specialized coatings exist for almost every industrial problem. Designers tend to incorporate specifications for the kind of coating to be used into their production directions. The dairy plant operator because of the highly corrosive nature of his product should find this type of thinking particularly valuable when remodeling an old plant or building a new one. The economical as well as the aesthetic desirability of using the proper coating for the particular job are a long step toward a better product at a lower price. It is also barely possible that the plant manager who understands the business of protective coatings will experience a reduction in the number of silver hairs that adorn his scalp as well as a decided diminution in the frequency and quality of his nightmares.

●

Glass-Tubed Heat Exchanger

Completion of the first units of glass-tubed pasteurizers and heat exchangers, believed to be the first of their kind ever designed for the wine and food industries, was announced recently by the Valley Foundry and Machine Works, Inc., of Fresno, California.

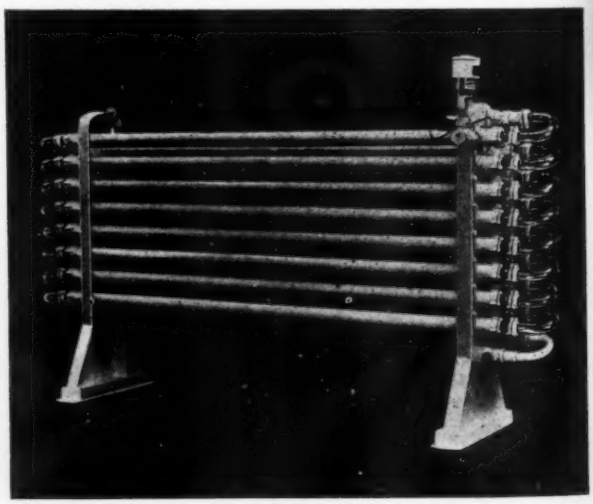
Initial tests prove the unit completely satisfactory and Leon S. Peters, president of Valley Foundry, reports that orders for the glass-tubed unit are being received beyond expectation.

"The use of glass in the wine and food processing industries offers many advantages to certain users", said Mr. Peters, in commenting on the new unit. "Glass offers no elements which may be picked up by hot liquids or acids during pasteurization." Valley engineers developed a glass-tubed unit as a result of the food processors' search for increased sanitary precautions.

The unit is of tube-in-tube design. Special Corning Pyrex glass piping is used for the inner tubes and the patented Valley return bends. A steel frame is provided and a steel outer jacket is used for either live steam or hot water. An ingenious steel casting handles steam or hot water to be returned from one tube to another. The glass tube is held in a special packing gland.

Capacity ranges from 200 gallons per hour to 3000 gallons or better are possible since the unit may be constructed with any number of passes which results in the required exposed square foot area for heat exchanging. Heat ranges up to 200°F with no minimum temperature.

Each unit is provided with a self operating, steam temperature control, thermometer, and pressure gauge. A special designed inlet and outer fitting of either bronze or stainless steel eliminates strain from hose connections. Casters are available to make these Valley units portable.



Valley Foundry's glass tubed heat exchanger.

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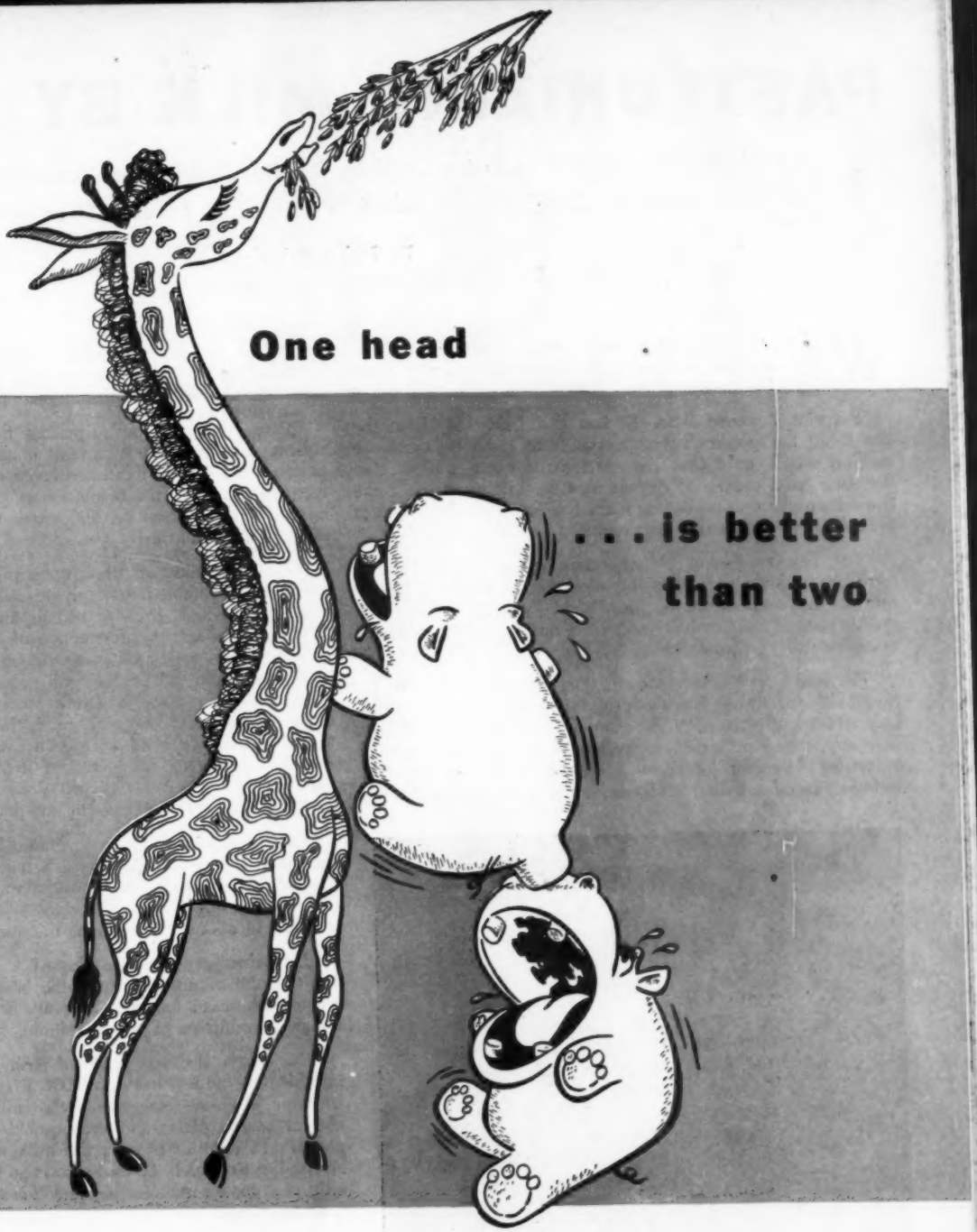


You save plenty of production headaches with *single* operation Seal-Kap. For it combines the seal with protection of the pouring lip—with closure in *one* operation. So this efficient way halves the number of possible breakdowns, takes less men to operate, and therefore cuts costs. Seal-Kapper speed can pace the fastest filler, too.

The nation's leading dairies use Seal-Kap for another good reason—customers like them. Seal-Kap is off with a single finger-twist, snaps back on as often as needed. And the pouring lip is guarded from air-borne bacteria and handling.

Supplies of Seal-Kap are now plentiful. Write us of your needs today.

The new American Seal-Hood, combining seal with long skirt, is the only such closure applied in one operation. Now being double-checked in field tests, it will soon be on the market. Used, like Seal-Kap, with any standard filler. Write for complete information on the new Seal-Hood.

AMERICAN SEAL-KAP CORPORATION, 11-05 44TH DRIVE, LONG ISLAND CITY 1, N. Y.

Be careful — don't overfill. In hot weather, be sure milk level is kept well below cap seat

PASTEURIZING MILK BY RADIO

Radiothermics Applied to Dairy Industry Has Resulted in New Pasteurizing Method — Low Bacteria Counts, Time Saved, Features of Process Developed by RCA

By Jack O'Brine
Radio Corporation of America

WHEN AMERICAN RADIO engineers started giving the "hotfoot" to lagging production lines a few years ago, the results proved both startling and gratifying.

Surprise stemmed from the fact that heat was about the last thing the public had expected from radio — a science and art which until that time had made quite a reputation for itself as a means of communication. Gratification came from discovery that radio frequency heat completed in minutes industrial operations that had required hours or even days.

This new science of radiothermics, a direct outgrowth of research in high frequency broadcasting, assumed a major role on the home front during World War II, and it now speeds output and reduces costs in a multitude of peacetime manufacturing processes.

Pioneering in its development, Dr. George H. Brown, C. N. Hoyler and R. A. Bierwirth, of the research staff of RCA Laboratories, Princeton, N. J., extended the usefulness of this new application of radio energy to a remarkable number of industries. Success has been achieved in sewing, riveting, welding, case-hardening and tempering; also in dehydrating vegetables, drying penicillin, purification of cereals, preheating plastics and baking plywood planes and boats, among other distinctive accomplishments.

Conducting tests to ascertain the feasibility of using radio heat for milk pasteurization. Radio Corporation of America built an experimental setup at RCA Laboratories, Princeton, N. J. Despite its resemblance to a Rube Goldberg invention the unit has achieved gratifying results.

Thus it is not too surprising that Dr. Brown and his colleagues turned their attention to the problem of milk pasteurization, and established contact with experienced dairymen who felt that the revolutionary possibilities of radio heat might bring solution to difficulties which had plagued the milk industry for many years.

The RCA scientists drew upon previous experience, particularly that obtained in applying radio-frequency heating to dry food products such as cereals and flour for the purpose of purification and the destruction of weevils and weevil eggs. In comparison with milk pasteurization, however, this process was simple and straightforward. Since the infesting objects usually contain more moisture than the bulk of material, selective heating takes place and the mean temperature of the food package need not reach excessive values. For instance, experiments conducted at RCA Laboratories revealed that a mean temperature of 140°F was sufficient to completely inactivate weevils and eggs in one-pound packages of cereal.

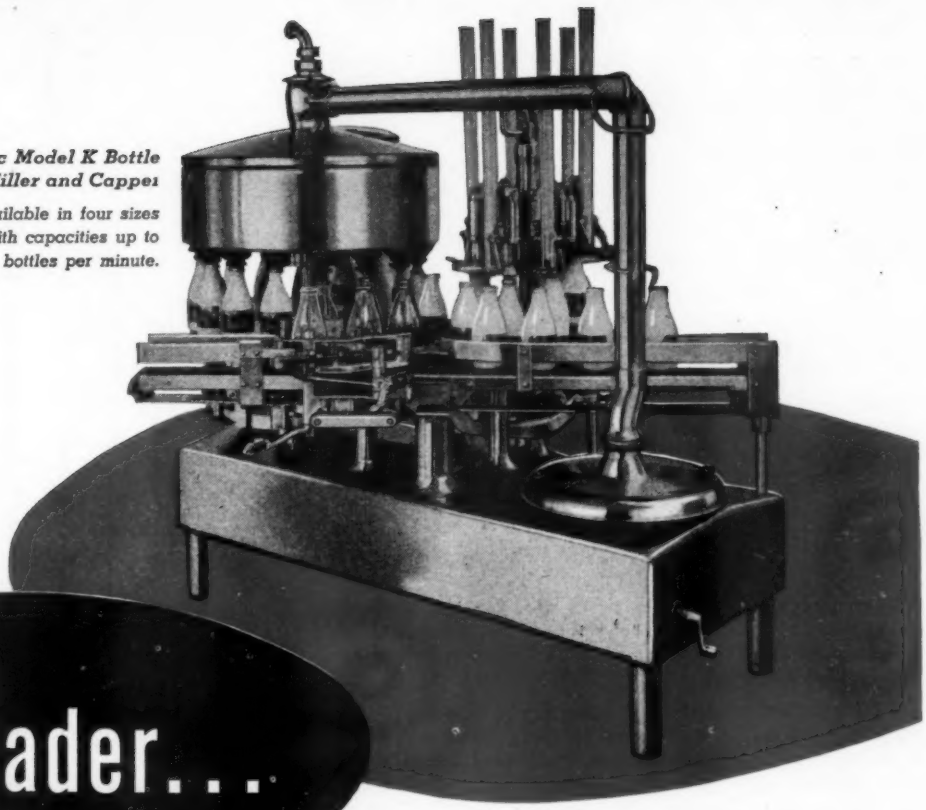
On the other hand, in conventional pasteurization of milk, the milk is normally heated to a temperature of 143°F and held at this temperature for 30 minutes. The milk is then cooled for storage or bottling with the bacteria content usually reduced to about 1 percent of the starting value.

Dairymen explained to the RCA scientists that if times less than 30 minutes are used the bacteria content is notably greater, whereas a longer time results in a cooked flavor and an apparent reduction of cream volume.

Discussion also was made of flash pasteurization methods in which the milk is heated to 161°F and held for 16 seconds. In some of these experiments the milk is spread on a thin film of heated plates and then quickly pumped over cooling plates. In another process the milk is passed between two electrodes to which 60-cycle voltage is applied. Since the milk is a good conductor, current flows through the milk and generates heat.

It appears that difficulties with the electrodes have kept this latter method from becoming popular. Nevertheless, this flash method indicated the advisability of heating by means of electric current to explore the effects to be encountered with temperatures far in excess of 161°F. It was felt that the use of radio-frequency power might make possible the heating of milk in continuous flow with the milk only in contact with glass.

Seeking to learn the solution of fundamental problems connected with this procedure, the RCA engineers carried out a series of experiments. In the first of these milk was pre-heated to 140°F and was then run through a long glass tube, ¼" in diameter. Electrodes wrapped around the glass tube consisted of two pieces of copper foil, causing radio-frequency current to flow from one elctrode through the glass to the milk stream and down the milk stream for a few inches.

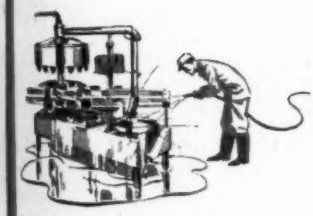


Gra-Vac Model K Bottle Filler and Capper

Available in four sizes with capacities up to 145 bottles per minute.

a leader....

for those who want to lead



● One glance at the new, all-stainless Gra-Vac Model K and you'll know you're looking at something extra special. It's completely new . . . setting new standards of performance, sanitation and appearance.

The Gra-Vac Model K gives you a better filling valve . . . a diaphragm-type valve that's more accurate and saves milk. Filling level is easily adjusted from cap seat level to one-quarter inch below.

The Model K also leads in sanitation. Its simple filling valve, for instance, is easily disassembled — completely removable from the bowl with nothing left inside but the beveled valve openings. Exterior, as well as all milk contact surfaces, is smooth, gleaming stainless, designed for quick drainage easy cleaning and lasting beauty.

Ask your Cherry-Burrell Representative about the Gra-Vac Model K. We think you'll discover quickly that *this* filler is years ahead in performance, sanitation and appearance!

GEARED TO SERVE THE DAIRY INDUSTRY

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Milk and Food Plant Equipment and Supplies
FACTORIES, WAREHOUSES, BRANCHES, OFFICES OR DISTRIBUTORS AT YOUR SERVICE IN 52 CITIES

Temperature was measured by a thermocouple inserted below the second electrode.

These experiments showed that excellent pasteurization could be obtained in about 67/1000 of a second though it was not possible to achieve temperatures above 190°F. The tendency above this temperature was to form steam pockets with uneven flow.

Study indicated that this tendency probably was due to non-uniform flow in the tube, wherein the milk stream adjacent to the glass was slowed down by friction and thus raised to a higher temperature than the center of the stream.

In efforts to circumvent this effect, the RCA engineers arranged the tube so as to produce a free-falling stream between the electrodes. With this arrangement, the milk could be heated to 205°F without steaming or breaking.

Using the uniform flow arrangement, the RCA scientists conducted a series of experiments in which bacteriological tests were found to be excellent. The pre-heating was accomplished by causing the milk to flow through tubing of pure tin which, in turn was submerged in a tank of warm water. The milk then flowed through the electrodes and was cooled by passing over a seat of fins through which ice water was pumped.

When samples of the milk pasteurized by this method were tasted, however, it was discovered that there was a definite cooked flavor whenever the milk had been heated to 190°F or higher.

The importance of maintaining the flavor of milk in any pasteurizing process is well-known to dairy plant operators, and this defect of the process was recognized immediately by the scientists.

It was decided that the cooling time of approximately 5 seconds apparently was too long. More rapid cooling was, however, achieved by injecting the milk stream into a vacuum chamber. The heating time was maintained at 67/1000 of a second but the cooling time by this method was reduced to 2/10 of a second. The milk was cooled to 135°F by means of the vacuum expansion then the milk was poured over cooling fins and reduced to 40°F.

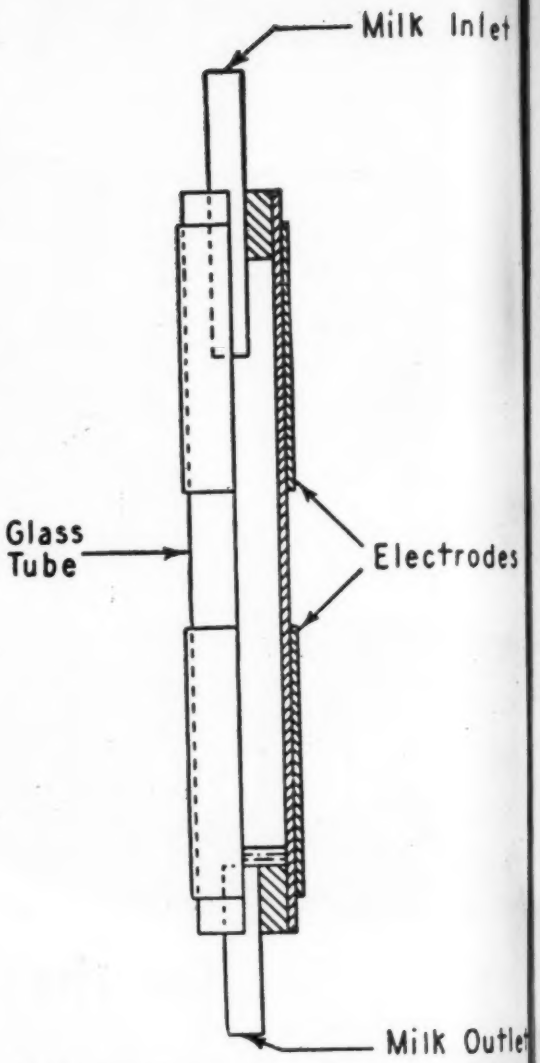
Samples for bacteriological tests were taken at the conclusion of the vacuum expansion and cream volume samples were taken at the lower temperature. Samples of milk which were tested showed no traces of cooked flavor at any temperature used. Even a sample taken at 205°F could not be differentiated from the raw milk.

Bacteria count was reduced to 100 as compared to 48,300 normally found in milk pasteurized by the conventional method at 143°F for 30 minutes. Bacillus coli was zero as compared to plus two in the conventional method.

Pasteurization by radio heat is so new that many questions remain as to the exact effect of the method, but perhaps the most striking and promising fact of all is that milk so treated keeps longer than pasteurized milk which we drink today.

While ordinary pasteurization kills most of the biological harmful bacteria found in milk, other non-harmful bacteria stay in the milk and cause it to sour. By eliminating these heat-resistant bacteria, progress has been made toward the development of a longer-keeping milk.

One of the chief limitations of the new process is that the high temperature used inevitably results in the production of homogenized milk. However, with greater quantities of homogenized milk being sold today than ever before it is conceivable that its acceptance will be widespread in a few years.



Arrangement used to produce a free flowing stream of milk betw electrodes in pasteurization by radio heat. Milk passing the electr is heated to 205 degrees F. in less than 11/10 of a second. Altho successful this system of pasteurization is still limited to the laborat

Experiments worked out by RCA in cooperation with Walker-Gordon Company and the Borden Company, l Eastern dairy products producers, provide for a contin radiation treatment which promises a possible foreshorte of milk-processing operations. The experiments, howe have been limited to the laboratory and, at the present t interest of milk producers is not deemed sufficient to wa commercialization of the system.

●

Armstrong Cork Dairy Ad

The efficient and highly specialized operation of a mo dairy plant is explained and illustrated in a full color adver ment entitled "How a Modern Dairy Operates" in the Au 30 issue of *The Saturday Evening Post.*

Prepared by the Building Materials Division of the A strong Cork Company in collaboration with the Milk Indu Foundation and the International Association of Ice C Manufacturers, the advertisement is one of a series plan by Armstrong, a pioneer in the insulation business.

Enjoy all the Profits from Ice Cream

This enjoyment of *all* of the profits from ice cream can be yours easily with a Mills Counter Ice Cream Freezer. Automatic in operation, ice cream freezing is reduced to three simple steps: fill with mix and flavor, set the controls, draw off into containers. No simpler way to make more money has ever been developed in the ice cream field.

MILLS
COUNTER
FREEZER

CONSIDER... ***AND WRITE US FOR DETAILS TODAY***

MILLS INDUSTRIES, INCORPORATED

DEPT. 506, 4100 FULLERTON AVENUE, CHICAGO 39, ILLINOIS • Makers of Mills Master Ice Cream Freezers and Hardening Cabinets

Record Breaking Attendance Expected at Miami Conventions

Four Dairy Organizations to Meet at Famous Resort During Last Week in October—DISI to Observe First Annual Meeting —Will Resume Student Judging After Wartime Suspension

The largest number of visiting industrialists we have ever welcomed" is the way in which Miami Beach officials are describing the forthcoming Florida dairy meetings scheduled for this October.

DAIRY CONVENTIONS will be thicker than the well known canine affliction when Dairy Industry Society International, International Association of Ice Cream Manufacturers, Milk Industry Foundation and the American Dairy Science Association converge on the famous resort city during the month of October.

Celebrating the first annual meeting of the organization Dairy Industries Society International will attract members from 30 countries. The DISI membership will convene in business and seminar sessions where plans for the further extension and strengthening of the organization will be developed. The relatively smaller sessions of the International society will not conflict with the larger IAICM and MIF meetings although DISI members will be afforded opportunity to meet and exchange experiences with the representatives of successful North American dairy enterprises as well as equippers and suppliers represented in the membership of Dairy Industries Supply Association which will be on hand in a stand-by status.

With DISI now less than a year old, its members, many of them acknowledged experts in varied phases of dairy progress, have already carried its activities to 30 countries, with participation by dairy farmers, dairy processors and manufacturers, equippers and suppliers, exporters and importers, trade associations, public officials, educators, and students.

The Miami Beach program includes observation of the Students' International Contest in Judging Dairy products, sponsored by Dairy Industries Supply Association and American Dairy Science Association, Monday morning, October 27. Some 20 colleges and universities from the United States, Canada and possibly other countries are expected to enter teams in competition. This 26th annual Contest, inaugurated in 1916 and interrupted only in 1918 and from 1942 to 1946 because of World Wars I and II, will be identified as International for the first time this year; hence the planned presence of DISI members as observers. Awards for the winners of the Contest will be made at a dinner Tuesday evening, arranged by the International Association of Ice Cream Manufacturers.

For Tuesday and Friday mornings, tours to nearby farms and plants are being arranged by Dairy Industries Supply Association in courtesy to DISI members. The tours will give dairy enterprises from other countries an opportunity to inspect at close range modern North American milk production and dairy processing facilities, equipment, and methods.

Motion pictures, further illustrating modern techniques in numerous countries and operations, will be shown [illegible] Monday and Friday afternoons.

Routine committee meetings will [illegible] held Tuesday afternoon and commit[illegible] seminars open to all interested parti[illegible] on Thursday morning and afternoo[illegible] Here the scope and substance of th[illegible] forthcoming year's activities will [illegible] determined during round-table discu[illegible] sions. Activities of the committees co[illegible] cerned include the development [illegible] techniques for stimulating dairy ente[illegible] prise in less advanced areas; technic[illegible] and practical counsel; preparation [illegible] multi-language handbooks for milk pr[illegible] ducers and dairy processors; researc[illegible] surveys of dairy enterprise condition[illegible] et cetera.

DISI's business session is planned f[illegible] Wednesday morning, including the ele[illegible] tion of officers and directors. Followin[illegible] a luncheon a world dairy outlook wi[illegible] be presented and dairy leaders fro[illegible] around the globe will be introduced.

A luncheon is also scheduled f[illegible] Thursday, to be followed by a pane[illegible] discussion led by various authorities o[illegible] delivery prospects for dairy farm an[illegible] dairy processing equipment and supplie[illegible]

On Thursday evening there will be [illegible] dinner followed by a "summing-up" and "looking-ahead."

(Please turn to Page 46)

Dairy Daze

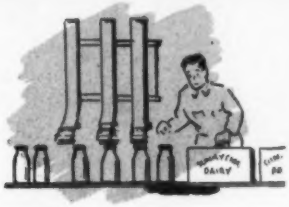
By Edgar Allen, J[illegible]

"IN DELIVERING THE MILK EACH MORNING HOW CAN YOU TELL WHICH BOTTLE IS *MY* BOTTLE?"

How Milk Dealers Gain with THATCHER T-SQUARES*

Listen to the Story . . .

First, T-Squares cost less than Standard, old-style milk bottles.

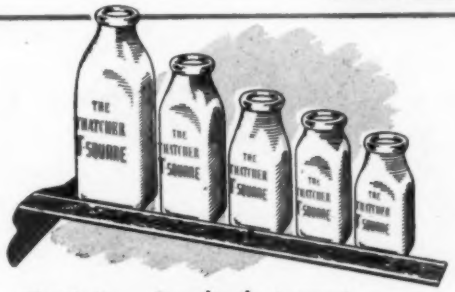


Then, the low cost of smaller caps accounts for real savings.

Added space in the dairy with compact T-Squares is a surprising reality.

Truckloads can be increased with more room and less tiring work for drivers.

Fewer delivery trips mean savings in gas, oil, tires and trucks.



That's it — Results that count.
Thatcher T-Squares mean less cost all along the line: in storage, caps, handling, trucks, and deliveries.

THATCHER GLASS

MANUFACTURING COMPANY, INC.

ELMIRA, NEW YORK

The tank truck pictured here is a part of the new system of picking up milk being tried by Western Milk Transport. Several dairies have their own tankers for delivering milk to the creamery, but this tanker makes the rounds of several dairies to get a full load. Using a tanker makes the loading of milk cans unnecessary. The capacity of this tank is the equivalent of 325 cans while the average load of milk in cans for most trucks is 140.

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. . . California . . .

Bold Character of West Coast Milk Industry is Shown by Tank Truck Pickup Operations

A Unique Story in Pictures

By G. A. Tainter, Jr.

Milk production in California is assuming the proportions and characteristics of a streamlined industrial operation. Many herds number more than a thousand head of milking cows. Barn men work on a shift schedule and organization of milkers into unions is a fairly common practice. Both labor and management find the arrangement satisfactory.

The extensive herds and the dry period that prevails on the Southern Pacific Coast during the summer results in less emphasis placed on pasture and more placed on controlled feeding. Many farmers hold their animals in large paddocks or corrals where a constant supply of roughage is available. These paddocks are adjacent to the milking barns and allow for a constant circulating movement of cows to barn back to corral. On some California dairy farms milking is going on sixteen hours a day.

After each pickup the driver changes the chart in the temperature recorder. This chart goes to the creamery as an accurate report on the temperature at which the milk has been held. The storage tank is a combination cooler and storage tank. The milk going directly in most cases from the milking machines into the tank and kept there until it is pumped into the tank truck.

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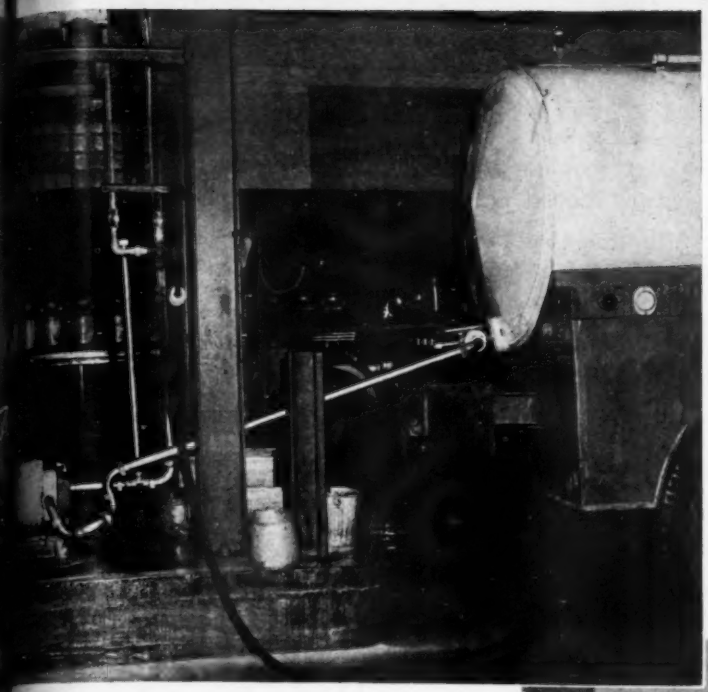
Although this type of large scale enterprise is a California development and is not found to any extent outside of the area there is a great deal that may be learned from the operations in the Golden State.



The use of tank trucks and pumps in the pick up system is in keeping with the extensive nature of the producing operations. In some cases producers have their own tank trucks that make the delivery to the milk plant, in other cases a truck company supplies the tankers. Many of the features of this system such as the storage temperature charts, rapid accurate measurement of load, test sample procedure, and the general speed and sanitary practices deserve careful study. A particularly fascinating practice is the method of handling milk in the dairy. The usual method of shifting cans in and out of cooling tanks is eliminated and the milk goes from the milking machines into the holding tanks where it is cooled and stored until pumped into the trucks.

The milk is pumped from the tanker into the storage tanks at the creamery. The tanker is thoroughly washed, steamed and then disinfected before being again used on the road. The driver does not wait for the tank to be unloaded and cleaned but hooks his cab onto a cleaned tank and goes out again for another load.

Milk is pumped directly from storage tank to truck. This tank had about 850 gallons in it which took only seven minutes to pump out. The average time the driver is at any one dairy is about 15 minutes. It would not be possible for him to unload enough empty cans and place them in the milk house in this time.

There is a gauge on the side of the tank that is connected to a float inside to measure exactly the number of gallons of milk in the tank. Any loss or shrinkage of the milk after it is loaded on the tanker is assumed by the creamery. The dairyman is paid according to the readings by the driver.

A sample of milk is taken directly from the tank after completely mixing the milk with a built in agitator to get an average sample. If the dairyman wants a sample to have as a check, he gets one at the same time. It is necessary for the driver to also be a licensed milk tester. The name and number of the dairy is marked on the sample which is placed in an ice box on the truck and is taken to the creamery laboratory to be analyzed.

XUM

ATLANTA MILK FIGHT PERSISTS

Issues in Georgia Dispute Clouded by Loose Talk — Price, Sanitation, Politics, Factors in Unfortunate Situation that Puts Handlers on the Spot

Exclusive Story to the American Milk Review
By Lee Rogers
Staff Member of the Atlanta Constitution

ATLANTA—The milk situation here is sour. The issues have clabbered. And, the public now waits for the cream of truth from a Superior Court separator. The milk distributors and producers also want to know where they stand.

It all began with a housewives' innocent demand to the State Milk Control Board that minimum prices for retail milk be lowered for minimum butterfat content. The results were a squabble over relative merits of pasteurized and raw milk, a fight between politicians and health authorities, distrust between consumer and dealers. This brought about a slackening off of milk sales in a period of relative plenty and the suspension of Atlanta's milk controls pending the outcome of a court hearing to force the sale of raw milk. And the housewives still pay, according to an Associated Press poll, the highest minimum prices for milk in the nation. However, some housewives have reported they believe the quality of milk has been improved voluntarily by the dairies as a result of all the charges and counter charges.

One thing is definite. The dairies have advertised more pointedly to quality and food value since the controversy started. All along the dairies have met the minimum standards tests of the city health department — standards lowered to 3.25 percent during the war at the request of the army. Recently the city council passed regulations setting the standards for butterfat the same as those of the U. S. Public Health Service. Currently milk is pegged at 22 cents a quart minimum in Atlanta. Special milks are higher priced.

Charges and Counter Charges

Last May women's organization representatives went before the State Milk Control Board and asked that the minimum 22 cents be lowered on minimum butterfat content milk. The Board, with two housewives represented and most of its members milk industry men, refused. Shortly thereafter the Atlanta Parent-Teachers Association charged cigarette stubs and bottle tops were found in milk sold to city school lunch rooms. The city council passed compulsory pasteurization laws and Health Director James F. Hackney announced publication of monthly bacteria counts of samples for Atlanta area dairies would be published.

At about this point State Secretary of Agriculture Tom Linder entered the picture, advocating sale of raw milk. Linder contended that the big dairies were hiding behind pasteurization and covering up the real issue — the providing of high quality milk for the consumer. "Milk that has to be pasteurized isn't fit to drink", Linder shouted.

Dr. Guy Lunsford, assistant State director of public health, then opened up. "I wouldn't drink any milk that isn't pasteurized," he said, and contended that the city of Atlanta had a legal right to set milk standards which differ from those provided under state law.

To enforce his on high quality milk, Secretary of Agriculture Linder ordered the grading of milk according to butterfat content. Previously all milk sold in Atlanta meeting health bacteria count standards and the 3.25 percent butterfat count was sold as Grade A milk.

The Secretary of Agriculture decreed that all milk tops must carry the label by butterfat count — A-500, A-400 and A-300, with the price adjusted to the butterfat content. Enforcement of Linder's decree had to be postponed because dairymen throughout the state couldn't get the tops by the prescribed time. The edict had not yet been enforced (August 19).

Dairyman Enters Suit

Continuing the fight against the city pasteurization ordinance which forbids the sale of any raw milk in Atlanta after July 17, Frank Neely, of Neely Farms, entered suit in Fulton Superior Court to prevent enforcement of the law. That suit is still pending.

Meanwhile, the city — after protests from all the women's organizations in town, had prevailed upon Council to pass the U. S. Public Health Service milk regulations. They were to become effective with the pasteurization ordinance July 17.

The court granted Neely an injunction until hearing could be held on the merits of his case. That hearing has been held but the judge has not ruled. In the meantime, Atlanta is actually without any controls on her milk supply.

Neely was joined by 10 other dairies in his suit. He took his court action "not because I care so much about pasteurization" but to protect other small dairy operators from "the whims of city and county officials."

"I do not believe that a city ought to set itself up against the laws of the State. (Georgia permits sale of certified raw milk). The laws of the State should be supreme and no city in any part of the State should declare as unwholesome or as injurious to health, a good clean product such as Grade A raw milk produced under strict complicance with Georgia law and which the Georgia Law has declared as whole and fit for human consumption," Neely said.

Linder attacked the city ordinance then as "a law permitting the pasteurization of slop."

The resulting publicity from these charges hurt the sale of milk.

Paul E. Reinhold, president of Foremost Dairies, Inc., stepped in with an appeal for prompt settlement of the city's milk controversy by prompt and joint action of the city, county and State health authorities to avoid further harm to the dairy industry. Pointing out that his company, which recently completed in Atlanta one of the newest dairy processing plants in the country, has no part in the controversy, Reinhold asserted that Foremost would co--operate wholeheartedly in settlement of the milk fight.

Reinhold advocated the adoption of the U. S. Public Health code by all the various health bodies. This the city already had attempted to do.

Another sidebar to the controversy was the pouring out of skim milk by the co-operative creamery in Eatonton. They had more milk than they could sell. This came in a period when milk was said to be plentiful, but at a time the milk men on the milk control board refused to lower consumer

(Please Turn to Page 57)

XUM

Solco helps build sound, healthy children

Solco's *high food value* helps build sturdy bones, firm muscles. Its malt chocolate flavor is down-right delicious! Children love it! Its whole milk content has instant sales appeal! And when you can offer busy mothers a *food-drink* ... in your own milk bottle... ready to serve ... without the bother of mixing or measuring... you've got something big!

Write us now for the Solco merchandising plan. Shortages are still acute but we want to see you laying plans now for a return to "rough and tumble" competition.

RUSH me the Solco story with free sample:

CHOICE FOODS Inc., 8561 E. Ten Mile Rd., Dept. A.M.R.-9, Centerline, Michigan

NAME_____ COMPANY_____

ADDRESS_____ CITY_____ STATE_____

Wisner Manufacturing Corp. Moves to New Location in N.Y.

Dairy Equipment and Engineering Firm Has Enviable Record In Supply Field — Veteran Employees Total 271 Years Experience

AFTER 27 YEARS of distinguished business operations at 241 West Broadway, New York City, the Wisner Manufacturing Corporation, prominent dairy equipment and engineering firm has moved into new and more adequate quarters at 122 Hudson Street in the city.

The move, the third since the company opened its doors 37 years ago on Greenwich Street, was not lightly taken. The possibility of moving outside of the city and putting up a new building was seriously considered but after consulting the opinion of many of the more than 450 accounts on the firm's sales roster the decision to remain in the city was made.

The Corporation will occupy the seven full floors of the premises they have acquired and will carry their usual full line of essential dairy supplies, machinery, and spare parts. They will continue to be representatives in the New York area for a number of leading equipment and supply manufacturers including The Heil Company, York Corporation, Pfaudler Company, Thatcher Manufacturing Company, Taylor Instrument Company, DeLaval Separator Company, Waukesha Foundry Company, The Tri-Clover Machine Company, The Sealright Company, and others.

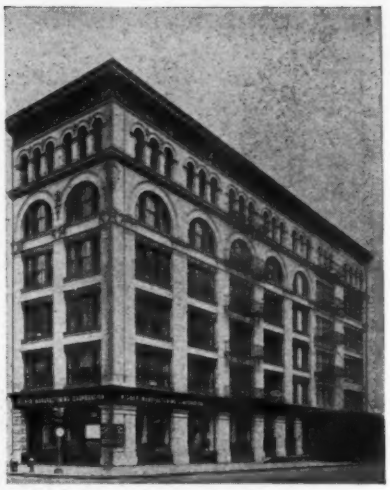
The firm is under the direction of Donald L. Albee, president, and R. D. Britton, secretary-treasurer. Active guidance of the firm is in the hands of Mr. Britton as general manager.

Mr. Britton, a veteran of 29 years in the dairy equipment business, came to the Wisner organization as a salesman in 1932. He began his career in the equipment field with the Davis-Watkins Dairyman's Manufacturing Company in 1919. In 1923 the Davis-Watkins concern was purchased by the Creamery Package Manufacturing Company. Mr. Britton was made manager of the New York office of the Creamery Package firm in 1927, a position which he held until 1932 when he went with his present concern.

Mr. Britton has cut a wide swath in the Dairy Industry. At the present time, in addition to his managerial duties with his firm, he is a director of the Dairy Industries Supply Association, a vice-president and director of the Milk Equipment Manufacturers and Distributors Corporation. Recently Mr. Britton has been serving on the Committee for the Dairy Industry to the New York State College of Agriculture at Cornell University.

Associated with Mr. Britton in the conduct of the dairy equipment business are a group of men with wide experience in the industry whose length of service in the field totals more than 271 years. There is reason for pride in Britton's face as he reads over the list: J. J. Rooney 28 years, J. W. Mayne 16 years, R. J. May 19 years, Lew Hatch 35 years, H. E. Barron 16 years, E. E. Schaffer 25 years, Nelson O'Glensky 14 years, F. J. Conway 30 years, R. W. Ritterbusch 38 years, William Wood 16 years, and Herbert Gage 6 years. "It's a hard combination to beat", Mr. Britton says. "Although we represent the best in the equipment, when the chips are down the best isn't much better than the organization which it serves. That's where 271 years of experience comes in handy. We try to give our customers the benefit of all those years of living and learning."

The Wisner organization serves the Dairy Industry in Metropolitan New York, Eastern New York, lower Connecticut, all of New Jersey, and the Northeastern portion of Pennsylvania.



New Wisner Manufacturing Corporation Building, 122 Hudson Street, New York City.

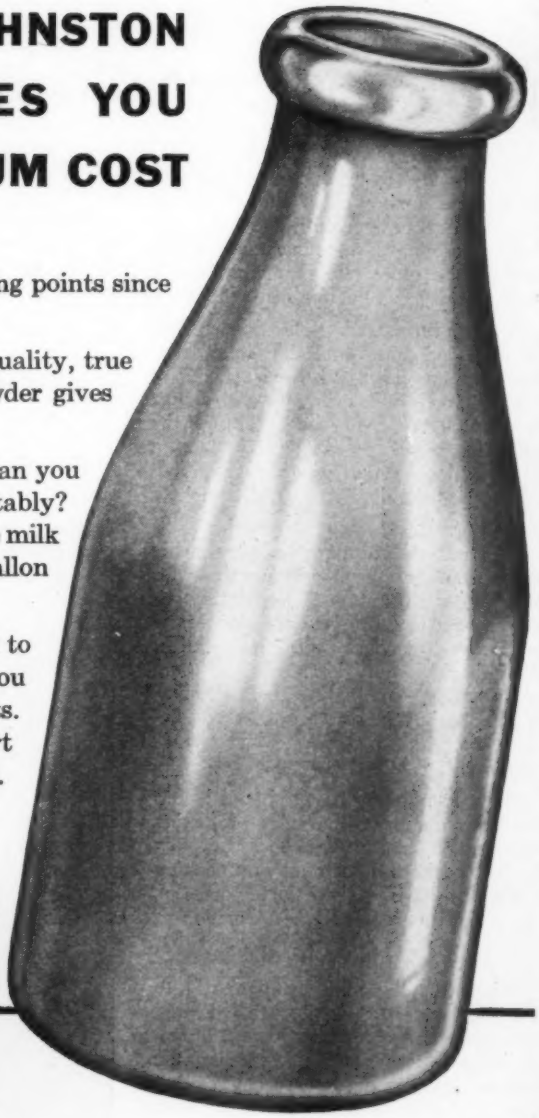
R. D. Britton, General Manager of the Wisner dairy supply and engineering firm. Mr. Britton is a dairy industry veteran of 29 years standing.

Interior second floor view shows plenty of office space. Gentleman barely visible on the extreme right is an unposed, honest-to-goodness customer.

XUM

END OF SUGAR RATIONING MEANS UP TO 33⅓% LOWER CHOCOLATE FLAVORING COST

YOUR SUGAR *PLUS* JOHNSTON DAIRY POWDER GIVES YOU TOP FLAVOR AT MINIMUM COST



Have you checked your chocolate milk on the following points since the end of sugar rationing?

QUALITY—Does your chocolate milk have the top quality, true chocolate flavor it should have? Johnston Dairy Powder gives chocolate milk a rich, smooth, satisfying flavor.

COST—Is your cost of flavoring dangerously high? Can you price your chocolate milk to meet competition profitably? With Johnston Dairy Powder you can flavor chocolate milk for only 8c a gallon. This will save you 4c or more per gallon compared with chocolate syrup flavoring.

MERCHANDISING—Do you have a promotional plan to help increase your sales volume? Johnston offers you several profit-proved plans which guarantee results. Ask your Johnston representative or write Robert A. Johnston Co., Box 691, Milwaukee 1, Wisconsin.

Johnston
CANDIES AND CHOCOLATE

ROBERT A. JOHNSTON COMPANY • MILWAUKEE • NEW YORK

XUM

TEACH 'EM TO SELL

Sales Training Is Again in the Limelight as the Changing Tides of the Milk Industry Shift from a Wartime Seller's Market to the Problems of a Peace Time Buyer's Market

A half forgotten art is re-examined in this provoking article on salesmanship. Buried under the hectic days of the war years salesmanship is once again becoming an integral part of a successful dairy business. Declining retail sales in the face of rising prices are placing a new premium on methods of carrying the milk handler's story to the customer. The Milk Industry Foundation suggests a way.

BEFORE THE WAR sales training was considered an important part of a milk company's selling organization. Competition was keen, and customers had to be sold and kept sold if the routeman wanted to hold on to his business. Advertising and sales promotion programs were constantly backing up the route salesman who had to keep a wary eye out for his competitor.

During the war the sales departments of milk companies and the route salesmen became less and less "sellers" of milk. Every milk company and almost every delivery man could sell all the milk he could possibly carry. As a result, sales training programs soon became projects that were put aside for another day.

The milk distributing industry made an outstanding record during the war, and a fair distribution of fresh milk was worked out to supply consumers. Many housewives, of course, did not get all of the milk they wanted at times and there were constant complaints about the lack of cream, but these were subdued because the win-the-war spirit was always uppermost.

Now conditions have changed and the sales manager, the sales promotion man and the route salesman are rapidly getting back to something approaching a pre-war basis. There is no question but what competition is here again.

Sales Training Available

What can the milk company do to restore its former well-organized and well-trained sales force? Some companies have their own ideas regarding the training of salesmen, but we believe that the best-known and most widely used training "course" is that fortunately available to the industry through the Milk Industry Foundation.

It is true that this sales training course is only available to members. It is also partially responsible for many milk companies joining the Foundation who have not been active in trade association work. There are said to be more inquiries now about becoming a member of the Milk Industry Foundation than there have been for years. The recent merger of the International Association of Milk Dealers and the Milk Industry Foundation created a new and stronger national trade association in the fluid milk distributing industry with members in every state.

If any milk company sales executive had the opportunity of assigning five of his best salesmen to riding the best milk routes of the country from coast to coast, if they could make notes of the successful methods used to increase orders, it would be rare training experience. This, in effect, is the basis of the program offered Foundation members. Just such a survey was made by trained observers that rode routes of star salesmen for three months. All of it was "boiled" down into concise reports of the choicest ideas.

The sales training course is known as the Balanced Job Program. It is said that more than $15,000 was spent by the association to build up this comprehensive course in successful milk selling that made it possible for a route salesman to increase sales and improve his earning power.

The Balanced Job training course was developed under the supervision of an association committee which included some of the outstanding sales executives in the industry. It was built on the results of intensive first-hand work by trained investigators. The result was a training course that teaches proved selling methods as part of a balanced job rather than a partial job. The Balanced Job guides rather than preaches, giving men new enthusiasm and helping them learn how to sell.

Training Aids Valuable

The basic material consists of two bound volumes, one for the route salesman, the other for the supervisor along with six slide films that are used at sales meetings covering specific subjects with which the route salesman should be familiar. In addition there is a meeting program guide which tells in detail how to conduct the sales training meeting groups.

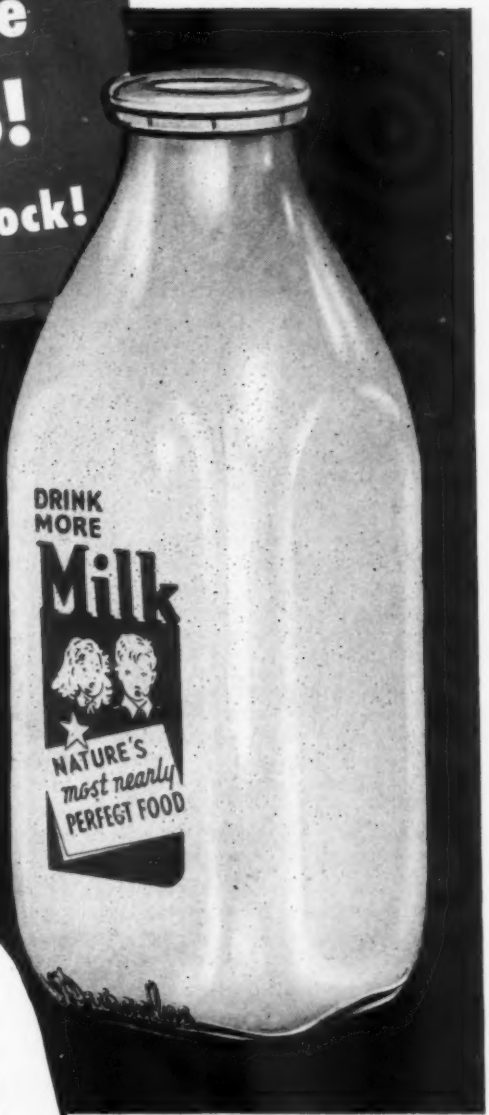
The slide films are on such themes as "Collection Time is Selling Time"; "Know 'em and Hold 'em", which shows what constitutes good service on the part of the salesman; "See 'em and Sell 'em" to help a route salesman know how to get new customers; "Bring 'em Back to Life", which covers the reselling of lost cus-

(Please turn to Page 47)

Does he know the answer? A training program might help.

It will pay you to use HANDI-SQUARES!

Easier for retailers to stock!



RETAILERS CAN STORE UP TO 50% MORE HANDI-SQUARES IN REFRIGERATORS

50% more potential sales, potential profits without expanding refrigeration facilities! And Handi-Squares' lightweight and squared-off proportions make them easy to handle!

THEIR CUSTOMERS PREFER HANDI-SQUARES, 9 TO 1

Housewives have long preferred milk in glass! They trust glass protection, appreciate glass convenience. *Now* they're voting an emphatic 9 to 1 preference for "squares" in comparison with other glass bottles!

You expand coldroom and storage facilities! Your trucks can carry more milk! Wholesale route time, empty handling time are substantially cut! Change-over cost is quickly absorbed by Handi-Squares' all-around economy . . . and you continue to benefit year after year from the economies Handi-Squares provide!

This space reserved for dairy's name, trade mark or sales message. Let us help you plan ACL for your bottles!

Duraglas TRADE MARK REG. U.S. PAT. OFF. **HANDI-SQUARE BOTTLES**

The trusted protection, unequaled economy of the returnable bottle *plus* new conveniences for the consumer and greater operating efficiency for you.

OWENS-ILLINOIS GLASS COMPANY • TOLEDO 1, OHIO • BRANCHES IN PRINCIPAL CITIES

XUM

EMPIRE STATE PRODUCTION PLAN

New York Program Offers Fresh Approach to Level Production Problem — Extension Service, Milk Handlers, Producers, Cooperate On Six Point Drive

LAST FALL 80,000 New York dairymen began to make a comeback in their fall milk production, after a serious drop during the war. November production in 1946 was 5 percent—19 million pounds—higher than in 1945. Production per cow was up 8 percent, more than offsetting a reduction in numbers of cows. And an 8 percent increase in November fluid milk sales in New York City over 1945 showed the actual flow of that milk to consumers.

Favorable physical conditions and a good milk price undoubtedly brought part of the increase; some of it could be attributed directly to the 6-Point Fall Milk Program.

Why More Fall Milk?

During the fall of 1945 the need for increasing fall milk production became plain—the consumption of fluid milk had increased faster than the production of milk, and particularly in the fall months.

In the New York Metropolitan Area, milk consumption increased 27 percent from 1940 to 1946. In Rochester the increase was 38 percent, and in Buffalo 58 percent. These were fairly even throughout the year. Cream sales had decreased during the period as a result of restrictions, but they were expected to climb back at least to pre-war levels.

Milk production hadn't kept up with the increased demand for milk, and it was anticipated that the demand for cream would rise again as soon as restrictions were lifted. Because of the highly seasonal nature of milk production, there was enough milk in the spring, but not enough in the fall months, especially November and December. And dairymen had relaxed their efforts to produce fall milk during the war when prices were leveled to some degree.

There were three ways in which supplies could be made to meet demand for milk: (1) Enlarging the milksheds; (2) increasing milk production during the fall months; and (3) raising the price of milk.

Increasing fall milk production was recognized as the best long-time solution for both producers and consumers.

Organization

During the winter of 1945 the dairy committee of the College of Agriculture at Cornell and county agricultural agents discussed the problem and finally outlined six practical suggestions that would be of immediate help to New York dairymen in meeting the fall milk shortage.

Since various milk companies were starting campaigns of their own, the dairy committee invited members of the dairy industry to meet with it. Nearly 100 members attended to discuss the final 6-point fall milk program and the suggested educational program was endorsed. The dairy industry decided to work through the overall program rather than by individual campaigns and agreed to raise $17,500 to help finance the campaign which was set up to flow through the county agents offices.

In each county the dairy committee of local farmers met to decide how the program could be adapted to the situation in that county.

The Department of Extension Teaching at the College of Agriculture was assigned the task of preparing all material from information supplied by the various subject-matter departments concerned, and of getting adequate distribution. All possible educational methods were to be used in an intensive program lasting at least 6 months.

The Program

This program, planned and guided by the College of Agriculture's Dairy Committee, supported and aided by the dairy industry and farm organizations, and carried out by county agricultural agents, industry field men, and others, was based on 6 points:

(1) Keep cows and heifers full of roughage this summer.
(2) Store some of the best hay for October and November feeding.
(3) Feed grain as liberally as possible this summer and fall.
(4) Stable herd before bad weather this fall.
(5) Save milk by using a calf starter this fall.
(6) Breed for more fall freshening.

W. T. Crandall, professor of animal husbandry at Cornell and chairman of the College Dairy Committee during the formation of the program, points out that efforts to increase fall milk production go along with good dairy practices in general. Says he, "There is a need for higher production per cow as well as for a more even distribution of that production throughout the year. Higher production per cow will reduce the total cost of producing a hundred pounds of milk and better distribution should mean higher average prices for milk.

"It is fortunate that practices which increase the total production of cows usually increase the production of fall milk. The higher the yearly average production, the greater the production in September, October, and November with less of a "peak" in May and June."

In Operation

This program was emphasized throughout the year. Meetings were held by county agricultural agents in cooperation with local dairy committees and college specialists; industry groups featured the program in meetings with farmers and in cooperation with county agricultural agents. Agents conducted tours and twilight meetings, emphasized the program in their contacts with farmers.

Press releases went direct from the college to 500 weekly and 106 daily papers, and additional county fill-in stories went to county agents from the college for local use, besides their own local stories. Information stories from the college were submitted for Farm Bureau Newses in each of the 56 counties by county agricultural agents, including suggested 2-page layouts during the critical periods. Industry groups cooperated by using information on the program in their own publications and in advertisements. Radio transcriptions were recorded by specialists at the college and sent to 27 stations.

A 45-minute colored sound movie covering all phases of dairy production was made and shown to thousands of farmers in the State, with a bulletin using pictures and explanations from the movie used as follow-up.

In addition there were fair exhibits, posters—every available medium for distributing the information to dairymen was used.

Results

The results for 1946 have been reviewed—more milk was

(Please turn to Page 57)

"One policy... fair to all..."

CHERRY-BURRELL CORPORATION
MILK AND FOOD PLANT EQUIPMENT AND SUPPLIES

CHICAGO 6, ILLINOIS

EXECUTIVE OFFICES
427 WEST RANDOLPH STREET

TELEPHONE DEARBORN 7900

September 15, 1947

To All Cherry-Burrell Customers:

Here's something that should interest you -- we have increased the production of our dairy plant equipment over five times since 1943!

That, you'll agree is quite a record -- one that reflects an ever-increasing preference for Cherry-Burrell machines. It also indicates what we have done to shorten the delivery of the equipment you may have ordered.

However, along with our efforts to increase production and speed delivery, we have booked a tremendous volume of business. Many customers have been waiting a long time for the equipment they need.

We appreciate the patience of our customers. We believe that the willingness of so many of them to wait for Cherry-Burrell equipment indicates the widespread desire for Cherry-Burrell machines. For this we are not only grateful, but are doing everything we can to make this wait as short as possible.

We have mentioned before, and wish to repeat, that we are adhering to our delivery policy of "first come, first served." This is the fair way to do business because it treats one customer the same as another. In cases of serious emergency, we have done our best to be of every assistance. We know from comments of our customers that they concur in the fairness of our delivery policy.

Of course, some customers have found it necessary to install new equipment almost immediately. While, in most cases the customer has preferred a Cherry-Burrell machine, our delivery estimate has not always been satisfactory. Where the customer has felt he could not wait, we have suggested that he buy elsewhere, if prompt delivery were vital to his business.

We keep your Cherry-Burrell Representative currently informed on deliveries. If you have not recently discussed the delivery estimate on your equipment orders, we urge you to do so.

We appreciate the business you have given us, and want you to know that we are earnestly working at the job of hastening the delivery of the equipment you may have on order.

Sincerely,

Earle L. Slayton

Earle L. Slayton
Sales Manager, Machinery Division

Golden Guernsey

A Quality Merchandising Opportunity for Food Producers

By E. H. Farrar, *American Guernsey Cattle Club*

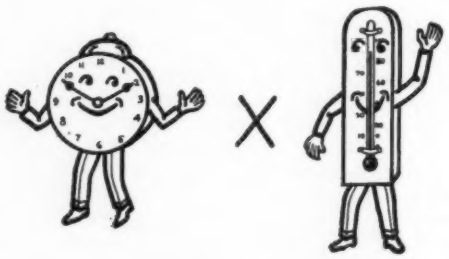
FOOD PRODUCERS are in direct competition. The dairyman competes with the meat producer, the vegetable and the fruit grower. The fresh product competes with those preserved by canning, quick freezing, or dehydration. What passes the lips of the consumer? Is the flavor good and satisfying? The food producer who gives thought to this is safe from the difficulty of losing his business to a competitor.

Competition is so keen among food producers that under normal conditions those who do not improve their methods are faced with failure.

If the customer doesn't like the product she won't buy it. Costs of production, processing, transportation, and retailing must be watched, or the consumer will be lost.

Proper advertising in all media is essential. This advertising must reach the consumer, but it must also reach the producer, the processor, the deliveryman, so that quality is maintained to the consumer.

Clarence Birdseye points out that food deteriorates in quality and flavor on the basis of *time times temperature.* Strawberries picked and left in the sun are no competition for



those picked and quickly chilled. The old cold storage method of slow freezing, under which food rapidly deteriorated, was replaced by quick freezing. It is possible that anhydrous foods will become real competitors in the food field as the time required to remove the water from the product has been reduced to only ten percent of the dehydrating method. On reducing cost of transportation, the dry product has a tremendous advantage. A carload of anhydrous spinach is the equivalent of a whole trainload of the fresh.

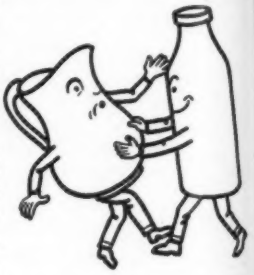
What does all this mean to the Guernsey milk producer? Organization is needed by food producers, (1) to maintain quality through to the consumers' lips; (2) to develop new methods for maintaining quality; (3) to develop methods to reduce costs and (4) to do a merchandising and advertising job on a national basis which makes the product important to the consumer.

Time measured, or fast milking, is producing results in cutting costs. Greater use of fertilizers, grass silage, new labor saving machinery, larger operating units, purebred cattle of high production, work simplification, tend to cut costs for the producer.

Larger volume, square bottles, reducing weight and space required for storage, every other day delivery, cut cost. Consolidation of routes and a larger number of units to a truck are all items of efficiency for the distributor.

The formulae for food deterioration, "time times temperature" reminds us that so far as quality is concerned, the speed with which milk is drawn and then chilled affects quality. This means more mechanical refrigeration in milk houses and proper location of milk house so that each pail of milk can be cooled quickly; care in holding at low temperatures, until the product reaches the distributor; quick unloading of milk and cooling; the speed of pasteurization (flash) where the product is raised to a high temperature and then quickly chilled; delivery of milk at low temperatures to the consumer.

Even the consumer must help by immediately placing it in the refrigerator. Only that milk for immediate use should be removed from the refrigerator. The old fashioned milk pitcher gives way to milk being poured into tumblers for drinking directly from covered bottles stored in a refrigerator. In this way milk reaches the lips of the consumer with a distinctive pleasing flavor that is characteristic of good milk.



The American Guernsey Cattle Club has set up a subsidiary, GOLDEN GUERNSEY, Inc., to organize producers. State associations act as agents.

Guernsey milk has a distinctive taste and inherent qualities which, if maintained through to the consumer, are so pleasing, no competitor can take business away.

An advertising and merchandising program, using all media, — national magazines, newspaper, radio, poster boards, direct mail, training films, is available.

Each market, each group of producers, must be fully acquainted with the essentials of competition in the food field. They must recognize competitors and competitors' statements for what they are and cooperate with those who are in their same field, either as producers, processors, or actively engaged in the transportation or merchandising of their product. Each part of the producing and distributing chain has its own problem and these problems can be discussed and understood.

The phenomenal growth in sales of GOLDEN GUERNSEY milk is testimony to the fact that while the various problems are always present, much progress has been made. Solving the problems of production, quality maintenance, merchandising, and reduced costs, is always active and never ending. It provides a challenge to intelligent application of sound principles in the food field and in the production field.

Consumers have a preference for milk with a rich yellow color and with an ample creamline up and down. The yellow color, due to additional carotin has a definite value in retaining good flavor, according to research at the New Jersey Agricultural Experiment Station. A report by the Council on Foods of The American Medical Association, as a result of research in collaboration with the University of Wisconsin, refers to the Vitamin A potency of Guernsey milk as follows:

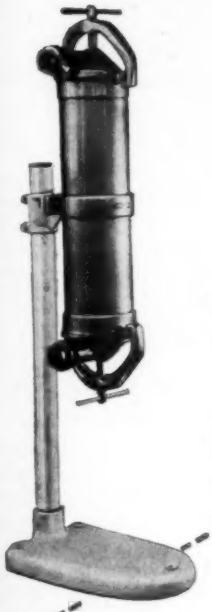
"The Guernsey milk has approximately 25 percent more potency than the market or vitamin D milks. This difference is about the same as that which obtains with respect to their fat contents."

Doing Your Own Processing and Delivery

Few producers find it desirable to assume the problems of processing, delivery, and merchandising. The field is highly competitive, especially in centers of average population. Costs per unit, with large volume, are lower. A producer must either work longer hours or take income from the production end if he is to cover losses likely to be sustained in processing

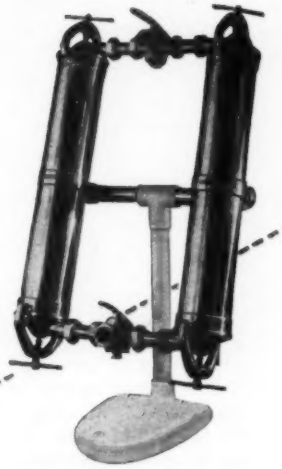
(Please Turn to Page 57)

For *Your* DAIRY IMPROVEMENT PROGRAM



ECONOMY VERTICAL FILTER
Capable of handling 6000 to 10,000 pounds per hour. An excellent unit for saving time in a small or medium size plant.

ECONOMY SANITARY PIPE LINE FILTERS
Equipped with oversize filter bags for increased capacity. Recessless, no moving parts to wear out. Compact in design — will fit your present pipe line without costly alterations. Capacity 1200 to 6000 pounds per hour.



ECONOMY TWIN FILTER
Can be operated together or independently. By diverting flow from one cylinder to the other, filter bags can be changed with no loss of production. Capacity 8000 to 20,000 pounds per hour.

A DAIRY IMPROVEMENT PROGRAM

1. Increases Peak Capacities
2. Lowers Operating Costs
3. Improves Product Quality
4. Prevents Production Bottlenecks
5. Increases Profits
6. Saves Vital Time
7. Protects Product Flavor
8. Increases Cream Volume
9. Reduces Milk Waste
10. Steps Up Operating Efficiency
11. Insures Space Economy
12. Reduces Maintenance Costs

4. How to PREVENT PRODUCTION BOTTLE-NECKS

Steady production, high capacity, faster cleaning, and unequaled efficiency make the S.B.C. Economy high speed filters a "must" in Your Dairy Improvement Program.

Both the Twin and Vertical Economy machines help prevent bottle-necks in production because they are equipped with oversize filter bags to increase filtering area — speed up milk flow. Their simplified and improved design makes cleaning a matter of seconds, and filter bag changes can be made in half the time of ordinary filters.

The interior of these units is one solid recessless tube that extends through the top and bottom casting, which is identical in arrangement to the recessless connection on sanitary pipe lines . . . with one piece caps that lift off with the turn of a wing nut.

They will fit in anywhere without major alterations of your present piping. Economy Filters are endorsed and approved by health departments everywhere.

Write today for Bulletin 15C which contains complete detailed information on the Economy Vertical, Twin, and Pipe Line Filters. It illustrates and describes this line, which is available in a wide range of sizes, made to do whatever production job your plant requires.

SPECIALTY BRASS COMPANY
KENOSHA, WISC.

SPECIALISTS IN QUALITY DAIRY EQUIPMENT

RESEARCH REPORT

The results of a broad research project conceived more than two years ago will be available this fall if plans go according to schedule. The results will not represent original research quite as much as they will represent a comprehensive review of existing knowledge of the economics of milk. The nature of the reports should make little difference, however. A gathering together of all available information on this difficult and effervescent subject will be helpful contribution.

The undertaking was developed under the guidance of the Experiment Station Directors of the Northeastern and North Central States who proposed the study in 1945. At that time C. E. F. Gutterman, Director of the Agricultural Experiment Station at Cornell and Noble Clark, Director of the Wisconsin Station were asked to name a committee of economists to carry out the proposals made by the Experiment Station Directors. These two men appointed a committee including R. K. Froker, Wisconsin, chairman, R. W. Bartlett, Illinois, G. F. Dow, Maine, C. W. Pierce, Penn State, and F. L. Thomsen of the Bureau of Agricultural Economics in the United States Department of Agriculture.

This committee proposed a schedule of four projects.

1. Uneven seasonal production.
2. Market Demand for Dairy Products.
3. Reducing Marketing Costs.
4. New Products, Uses, and Markets.

The committee felt that the best procedure would be to select the most pressing of the problems and break it down into workable sections. Each section could then be assigned to a submittee for study. This was done. The problem selected was seasonal variation in production. Sub topics developed from the main topic were:

1. The Effect of Seasonal Price and Production Patterns on Producer's Returns.
2. The Effect of Seasonal Price Plans on Producer's Milk Deliveries.
3. The Procurement of Supplemental Milk Supplies.

Sub-committees assigned to these investigations were for the first sub-topic G. F. Dow, Maine, W. W. Armentrout, West Virginia, S. M. Johnson, Connecticut, J. W. Carncross, Rutgers, and M. S. Parsons, Bureau of Agricultural Economics, U.S.D.A. The committee for the second sub-topic included G. B. Wood, Purdue, William Bredo, New Hampshire, J. E. Crosby, Missouri, C. G. McBride, Ohio, J. B. Roberts, Kentucky, J. L. Tennant, Rhode Island, and A. G. Walker, New Jersey. On the third subtopic the men assigned were: A. A. Brown, Massachusetts, R. K. Froker, Wisconsin, C. M. Harden, Michigan, and A. G. Mathes, Iowa. Professor Thurston Adams of Vermont was asked to be over all chairman in charge of setting up the sub-committees and Dr. Alan MacLeod was asked to serve as general secretary. Dr. MacLeod's untimely death late in June robbed the project of an able administrator and the Industry of a worthy champion.

All of the sub-committees have been actively engaged in carrying out their particular share of the project. The reports, which should be issued during the latter part of this year, will summarize existing knowledge and point out the most important gaps. The method adopted by the sub-committees in this undertaking has been for individual members to report on a particular phase of the committee topic. Individual reports are sent to other members of the committee for comment and the finished product from each member are brought together in a final committee report.

The importance of the reports lies in the fact that this is the first time that all of the available material has been brought together.

A second project undertaken by the Experiment Station Directors was the preparation of a report on the Market Demand for Milk. Dr. Froker of Wisconsin, Dr. Spencer of Cornell and Dr. MacLeod were appointed to compile this report. It is expected that the report will be published this fall.

These projects which are listed under the heading Dairy Marketing Research in the North East and North Central States should not be confused with the Interregional Dairy Marketing Project supported by Hope-Flannigan funds. The first meeting in connection with this Hope-Flannigan project was held in January of this year when representatives from 29 states met in Cincinnati. The mechanics and details of procedure for the undertaking are being worked out at the present time.

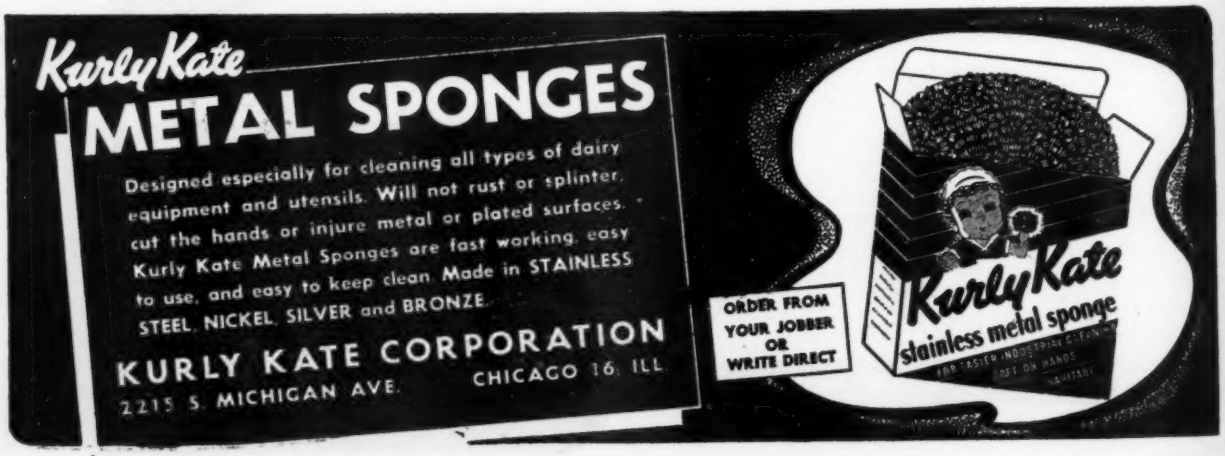
●

RHODES CHEMICAL SOLD

Fairfield Laboratories, Inc., Plainfield, N. J., have acquired Rhodes Chemical Corporation of Philadelphia according to a recent announcement by the New Jersey concern.

Rhodes Chemical Corporation, for the past four years, has been manufacturing a complete line of quaternary ammonium compounds.

The acquisition of Rhodes Chemical Corporation by Fairfield Laboratories, Inc., has resulted in a complete change in executive and technical personnel. Wellington Rounds, President and General Manager of Fairfield Laboratories, will serve in the same capacity in the Rhodes organization. Production and laboratory research at the Philadelphia plant will be in charge of William J. Shibe, Chief Chemist. The Industrial Toxicology Laboratories, Inc., formerly Smyth Laboratories, in Philadelphia, have been retained.


Kurly Kate
METAL SPONGES
Designed especially for cleaning all types of dairy equipment and utensils. Will not rust or splinter, cut the hands or injure metal or plated surfaces. Kurly Kate Metal Sponges are fast working, easy to use, and easy to keep clean. Made in STAINLESS STEEL, NICKEL, SILVER and BRONZE.
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ORDER FROM YOUR JOBBER OR WRITE DIRECT
Kurly Kate
stainless metal sponge

ANCHOR ALKALI

A SOLVAY
Specialty
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The Outstanding Product for Clean, Sterile Bottles

Solvay Anchor Alkali is one of many quality cleansers developed by SOLVAY ...the world's largest producer of alkalies and alkali products.

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Milk Prices . . . . . Resist Rise

Fluid Prices Compare Favorably With General Price Index, Food Survey Shows

ACCORDING TO A recent survey made by the Milk Industry Foundation comparison of price increases in the fluid milk market with the Jack-In-The-Bean-Stalk rise of all food prices during the last seven years reflects considerable credit on the milk industry. Not only has the wage scale throughout the industry, particularly in the case of routemen, kept pace with and in some cases outstripped living costs, but prices to producers have reached new highs.

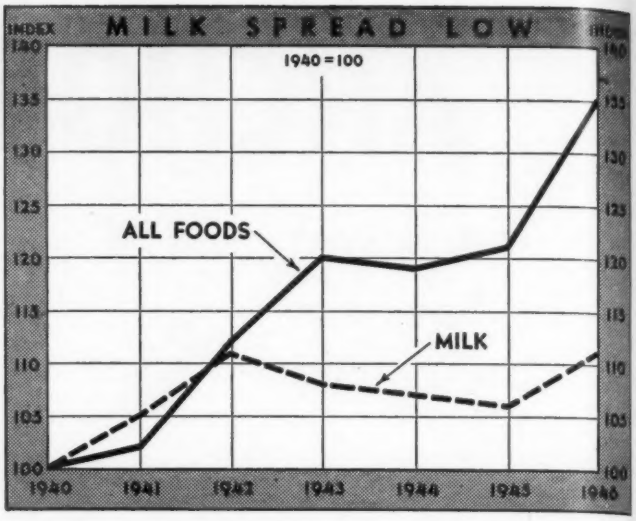
In spite of these heavy cost factors, retail and farm prices for fluid milk have advanced a little over 14 percent in comparison for a whopping 52 percent for all foods. Of course there are individual cases where the comparisons are not as striking as those found in the overall picture, nevertheless, the limited increase in the price of milk appears to be the rule rather than the exception.

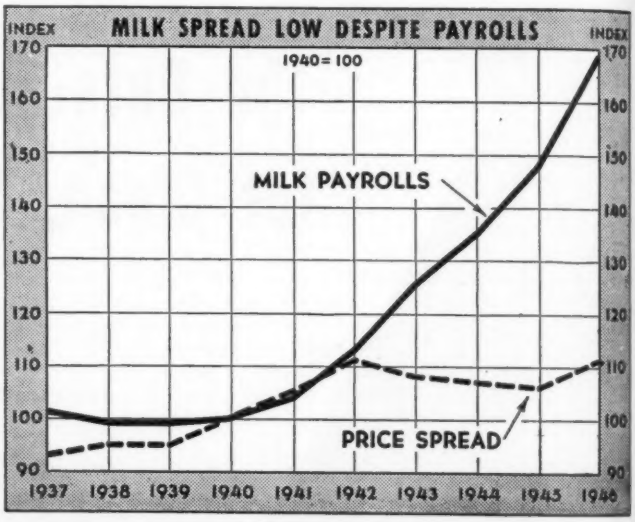
There are several reasons for the relatively mild increase in milk prices, the most outstanding of which is the practice of every other day delivery. This wartime emergency measure has proved to be an economy of the first magnitude and when one considers that the cost of delivery runs as high as or higher than 25 percent of the total cost of a quart of milk on the consumer's doorstep, the wide saving in this type of delivery becomes apparent.

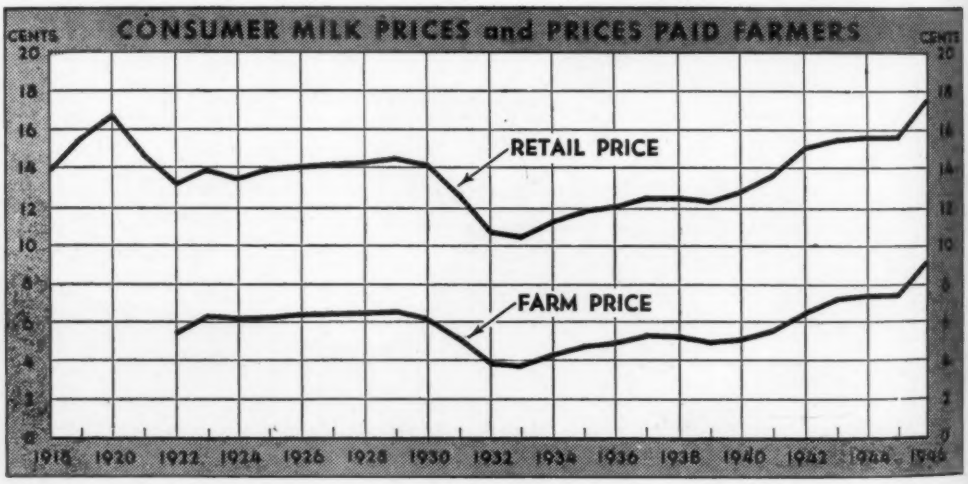
Other reasons for the price holding feat are found in better and more efficient management practices, and in the face of some critical shortages of new equipment, more economical processing of fluid milk. Although most of the major equipment manufacturers can only promise delivery of many of their items on a four to six months basis, there have been plant renovations.

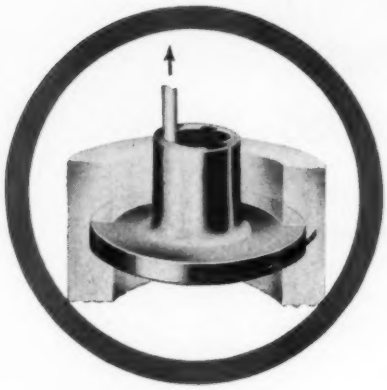
Still another angle of the price situation calls for some good feeling on the part of the industry. Most of the increased revenue has been passed on to the producer or the routemen. The "spread" on which handlers have been operating had increased about 11 percent up to 1946. This conservative advance stands in sharp contrast to the 70 percent increase in milk payrolls during the same period.

Unfortunately the general public does not share the Industry's pride in the price limiting achievement. The truth of the matter is that milk sales have fallen off and a certain amount of public resentment has been generated by higher milk prices. There are several reasons for this attitude. The main reason is probably due to the fact that in most cases milk is billed on a monthly basis and the cumulative effect of thirty days of a higher price is much more spectacular than as though the item were purchased every day. Also the decline in earning power from the lush overtime of war plant jobs to the straight forty hour week has had some effect. Whatever the reasons the general reaction to milk prices is dissatisfaction mixed with bewilderment. And in most cases the opinion is held that the milk handler is responsible.

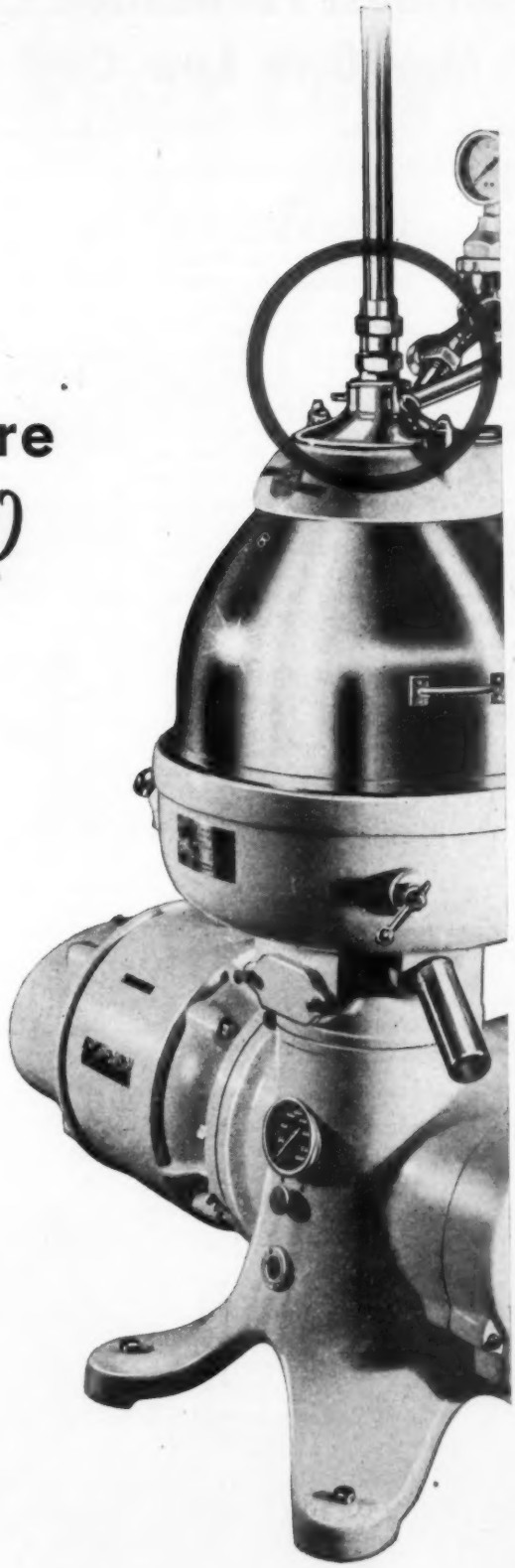








This one feature can save you $600



Columbia-Westfalia Separators and Clarifiers *require no positive pumps.* They are fed by gravity. Or in instances where that is not practical, by an ordinary centrifugal pump. Yet both milk and cream are discharged under sufficient pressure to carry to any reasonable part of the plant.

This feature results in an initial saving of up to $600 *plus* further savings in maintenance expenses.

Columbia-Westfalia users also enjoy other advantages. Absence of rubbing seals cuts gasket replacement costs as much as 95%. Exclusive no-foam "Liquid seal"... essential parts of stainless steel... ball bearings and automatic lubrication insure efficient operation and long, trouble-free service. Write for name of nearest distributor. Columbia-Westfalia Centrifuge, Inc., Crystal Park, Canton 5, Ohio.

Columbia Westfalia

SEPARATORS • CLARIFIERS

Foremost Foundation Experiments May Give Low Cost Dairy Feed

Penney Farms Project Utilizes Sweet Potatoes in Search for Corn Substitute — Preliminary Tests Show Satisfactory Results

PENNEY FARMS, Florida, a progressive little town, some 35 miles west of Jacksonville is the scene of agricultural history in the making, according to arecent announcement from the Foremost foundation.

The Foundation, a non-profit organization created to improve the Dairy Industry in the South, has set up an experimental laboratory on the 80,000 acre farm from which the town received its name. The purpose of the laboratory is to seek out a method whereby sweet potatoes may be substituted for corn as a dairy feed in the South. Most promising development at the present time is a dehydrating and grinding process.

Experiments with the sweet potatoes are being conducted under the direction of Dr. C. Lewis Wrenshall, formerly head of the Organic and Agricultural Chemistry, Division of Southern Research Institute, Birmingham, Ala., and more recently Director of Research Laboratories for Foremost Dairies, Inc.

Rich in Carotene

Dr. Wrenshall is certain that the 1947 experiment in raising and dehydrating sweet potatoes at Penney Farms will be successful. The ground dehydrated sweet potatoes are mixed with oats, citrus pulp, a protein concentrate and roughage. He said that the dehydrated sweet potato is very rich in Carotene, which is pro-vitamin A.

Early experiments indicate that milk produced by sweet potato fed cattle is rich in quality. Quantity of production also appears to be favorably affected by the sweet potato diet.

A number of the 600 dairy cows at Penney Farms have been under experiment for some time. According to C. O. Babcock, treasurer of Foremost Properties, Inc., who is aiding Dr. Wrenshall, the animals appear to like the sweet potato feed and thrive on it.

Saving to Producers

Dr. Wrenshall says that milk producers in Florida may look forward to the time when they will no longer have to import between $30,000,000 and $40,000,000 worth of feed corn annually. This means a great saving to milk producers as corn for cattle feed now costs between $85 and $90 per ton whereas the dehydrated sweet potato feed is being produced at Penney Farms for about $50 per ton.

C. M. Burkhalter, general superintendent of Foremost Properties, Inc., also helping Dr. Wrenshall, said that sweet potatoes can be raised in soil where little else will grow. It is insect resistant, hardy, and requires a minimum of cultivation. The average sweet potato weighs about three pounds but some have been raised at Penney Farms weighing as much as eight pounds, seven ounces.

The Foremost Foundation was established by the directors of Foremost Dairies, Inc., with headquarters in Jacksonville, Florida. Paul E. Reinhold, one of the dairy industry's best known leaders, is president of Foremost Dairies,

Dr. C. Lewis Wrenshall

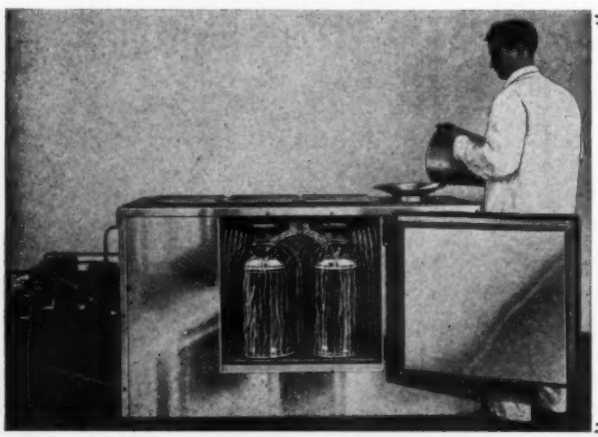
Mr. Reinhold and J. R. Lindley, treasurer of Foremost Dairies, are officers of the Foundation.

Present plans call for completion of the experiment by the end of 1947.

STANGE BUYS HEINZ PROPERTY

Wm. J. Stange Co. of Chicago, manufacturers of N. D. G. A. Antioxidant purchased the Chicago Distributing Center of H. J. Heinz Company, Pittsburgh, Pa., according to an announcement by Wm. B. Durling, Stange's President. The three story building is located at 342 N. Western Avenue, contains 55,000 square feet of floor space and is completely equipped with modern shipping facilities, both rail and truck.

According to Mr. Durling, this expansion and modernization program should be completed by early 1948, allowing for all foreseeable delays, and will place the Stange Company in a greatly improved position for serving the expanding markets for its products.



FOR REFRIGERATION WITHOUT LABOR

IT'S THE T-33

FOR MILK COOLING — FOR CREAM COOLING

So Easy . . . So Convenient and Fast. No heavy cans to lift. You merely place the empty cans in the cabinet, place the milk strainer in the proper opening on top of cabinet and pour your milk through the strainer.

ZERO MANUFACTURING COMPANY

General Office — Washington, Missouri

Your SALES CURVE Parallels PRODUCT QUALITY

Keep BOTH on the Upswing with a...

Buflovak Double Effect EVAPORATOR

Selling today demands the stimulation of quality. A quality product, priced right, will always find a ready and profitable market. The installation of a Buflovak Double Effect Evaporator can well be the most important step in recapturing your "buyers' market" sales volume. For with a Buflovak, you produce condensed and evaporated milks that possess preference creating flavor, rich natural color and uniform texture . . . in short, products that sell.

And Buflovak's operating economies enable you to meet price competition. A 99.9+% solids recovery, 50% savings in steam and cooling water, simplified sanitation and countless other savings cut production costs and broaden your profit margin.

The *Buflovak* ROLLER DRYER

For drying whole milk, skim milk or buttermilk, your best investment is the new BUFLOVAK Roller Dryer — another efficient, economical installation for any progressive creamery.

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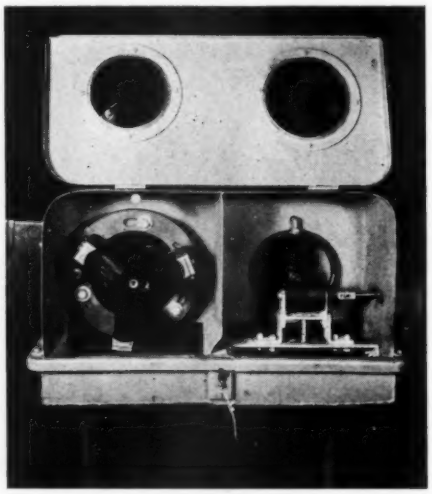
Renaissance In Cleaning Equipment

(Continued From Page 10)

drives the cleaning solution pump while the exterior brush assembly is rotated by another motor. The cleaning solution for the exterior operation is supplied through a perforated pipe mounted directly over the pipe being cleaned. An extremely important feature of the brushes used in this cleaner is the length of the bristles which is such that the scrubbing is done with the ends of the bristles. In this manner the brushes do not swab but give a thorough scrubbing effect. The bristles are made of a special type of nylon and while the initial investment is relatively great, the brushes through their increased length of life and improved cleaning action, are more economical than the run of the mill brushes in ordinary use.

Cleaning solution used in the pipe cleaning process drops upon a trough located underneath the unit which carries the used solution back to the solution storage tank where it is reheated to the proper temperature. A small electrical heating unit keeps the solution at the desired temperature while a centrifugal pump forces the cleaning solution through pipes to the brushes. The solution is drawn near the bottom of the storage tank in order to avoid circulating the scum that accumulates during cleaning.



The sanitary pipe cleaner shown here with guard raised provides for internal and external cleaning in one operation. Rinsing device with automatic water feed may be seen on left hand side.

Rinsing comprises another element in the unit designed by Mr. Perry. One of the outstanding features of this part of the machine is the fact that rinse water is used only onee. The interior of the pipe is rinsed by means of a spray from a pipe with a nonmetallic knob mounted on the end. The spray is delivered into the interior of the section of pipe being cleaned. The outside is rinsed by passing the pipe through a rinsing ring. The flow of the warm rinsing water is governed by means of an automatically controlled trigger that supplies rinse water only when desired. Not only does this effect an economy of water but insures that each piece of equipment that is rinsed will be rinsed with absolutely fresh rinse water of the proper temperature.

Sanitary Pipe Rack

There was nothing too common place to escape Mr. Perry's notice in the course of the study. The matter of handling stainless steel sanitary pipe from its point of installation to the cleaning unit called for some thought. The result was a sanitary pipe rack mounted on wheels festooned with short arms covered with Neoprene. The completed rack accomplishes a number of things. First it provides for economy of time in handling the pipe. Units are taken down placed on the rack, and wheeled to the cleaning machine, cleaned, replaced on the rack and wheeled back to their appointed places. Secondly, the rack is so designed that metal does not come in contact with metal and the Neoprene coating on the arms successfully prevents marring of the stainless steel surfaces. Thirdly, the variation in distances between arms provides for pipe of different lengths while the whole assembly is conducive to the type of orderly operation that is the mark of successful management.

The problem of sanitary fittings as distinguished from sanitary pipe involved the development of another cleaning unit. The old method of collecting sanitary fittings and dumping them into a cleaning vat, scrubbing them and then placing them in a vat of rinsing water was not only time consuming and fatiguing but did not result in high grade cleaning. The sanitary fittings cleaner, as designed by Mr. Perry, has the appearance of a sink with drain boards on either side. The fittings are brought to the cleaner in a wheeled tray or "buggy" the trays of which are lined with rubber. The cleaner has two brushes driven by a small motor which causes them to rotate in opposite directions. The operator takes a fitting from the fitting "buggy" and places it over one of the brushes. Since the two brushes are so placed their their bristles mesh this allows fitting to be cleaned inside and outside at the same time. Above the brushes is a perforated pipe through which cleaning solution is delivered to the brushes and on the fitting that is being cleaned.

When the scrubbing operation is finished the workman presses a conveniently placed valve pedal with his foot which produces a spray of clean, properly heated rinse water. This spray is located over the rinsing section of the cleaner and the water is drained off immediately after using so that each fitting is rinsed in fresh, clean water. The fitting is then placed on the drain board and allowed to drain. The general handiness of this arrangement is appreciated by plant workmen who have had the opportunity to use it. No lost motion

great news for the dairy industry!

WATCH FOR Announcement
next month
NEW SENSATIONAL S-T-S
"KING" STAINLESS STEEL
(Hand Operated)
also "KING" AIR PRESSURE
MILK SEDIMENT TESTERS
IMMEDIATE SHIPMENT on all Model K-B and K-C Testers, "E-Z LOCK" Sediment Test Record Cards —"Milktest" and "Creamtest" Sediment Discs.
Order Today
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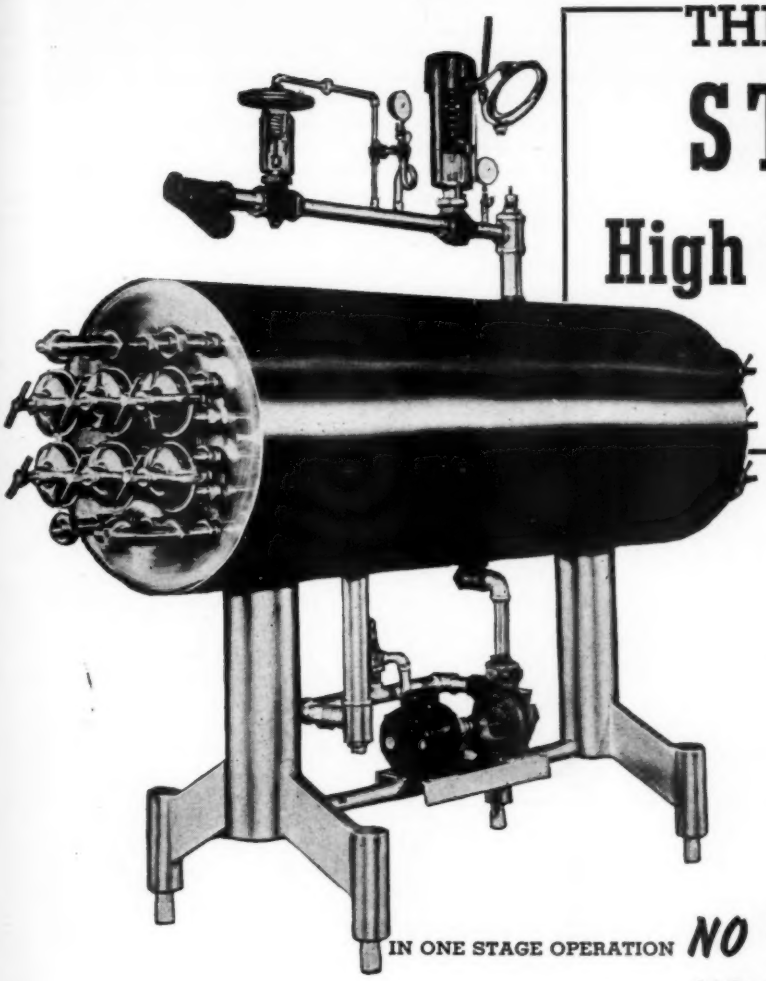
"World's Largest Distributors of Milk Sediment Testers and Sediment Test Cards"

THE CHESTER STE-VAC High Temperature HEATER



. . . will heat milk and milk products to high temperatures without burn on. This heater is designed and constructed to meet the highest sanitary requirements and the lowest cleaning budget.

Here is the SV-8, containing 18 tubes each 6′ long. This heater can handle 6,000 pounds of milk per hour in heating from 40° to 190°. Floor space 2′ by 8′. Shipping weight 2,000 pounds.

IN ONE STAGE OPERATION ***NO "BURN ON" AT 190°***

IN TWO STAGE OPERATION ***NO "BURN ON" AT 240°***

A STE-VAC HEATER OPERATOR WRITES...

"We use the Ste-Vac to flash pasteurize. We all feel that this is the most satisfactory piece of equipment that we ever bought. It does everything claimed for it and a lot more. When in operation it takes care of itself, and to wash it all they do is pump hot water with SR-10 through it, and when it is opened it is clean. We feel that it has stepped up our dryer operations about 30%."

You have the perfect answer to high temperature heating of milk and milk products without burn on when you use a Ste-Vac Heater. They are designed so that one, or a combination of two of the standard models, can be easily adapted to practically any milk or milk product heating operation.

All product contact surfaces are stainless steel and they are now available with stainless steel heads and jackets as well. The controls maintain even temperatures—heating to as high as 190° in one stage operation, or up to 240° in two stages. Return cups and clamps are both interchangeable. A simple, single-use paper gasket provides the most sanitary type milk seal known.

Ste-Vac Heaters are widely used in the production of condensed and evaporated milk, powdered milk, ice cream mix, cheese, butter and as preheaters in other processes such as separation.

Shipped as package units, Ste-Vac Heaters are ready for easy installation on delivery.

Capacities from 4,000 to 40,000 lbs./hr.

FULL SPECIFICATIONS ON REQUEST

Designers and Manufacturers of Milk Handling Equipment Since 1899

CHESTER DAIRY SUPPLY CO.

5TH AND TILGHMAN STREETS **CHESTER, PA.**

is involved. An economy of water is realized. The entire operation is speeded up and probably most important of all an efficient, complete washing job is achieved. The sanitary fittings cleaner can be used on almost any type of fitting provided that the fitting has a minimum diameter of one inch. If a smaller diameter is encountered, special brushes for that type of fitting must be used.

One of the first things the study revealed was that equipment and fittings designed for specialized functions require specialized cleaning devices. The laborous character of separator and clarifier disc cleaning is a case in point. A unit was designed, modified, and finally constructed which, says Mr. Perry "does a satisfactory job of scrubbing and rinsing but a few more minor changes in design may be advisable."

This disc cleaner is somewhat similar in design to the sanitary fittings cleaner. There are two compartments, one for scrubbing and one for rinsing. Two power driven brushes so placed that their bristles approximately touch are the scrubbing units. The disc to be cleaned is placed between the brushes and as they rotate they spin the disc at the same time. The disc, of course, rotates at a much slower rate than the brushes so that when the disc has completed one revolution it has been thoroughly scrubbed.

The rinsing compartment, immediately adjacent to the scrubbing section has three rinsing nozzles. One of the rinsing nozzles is placed above the compartment and two are in the compartment. By simply passing the cleaned disc through the curtain of spray set up by these nozzles a thorough rinsing is accomplished. The disc can then be placed on a movable rod or drainboard that is located on the right of the rinsing compartment.

Brushes Important

Brushes have played an important part in the design of the cleaning units. In addition to incorporating brushes into the special devices, attention was given to hand brushes that are indispensible in the conduct of cleaning operations. The principal difficulties with the usual cleaning methods involving hand brushes were many. The brush must be constantly dipped in the cleaning solution which Mr. Perry declares "gives the operator a constant series of setting up exercises but doesn't do much to improve his effectiveness." Furthermore the temperature of the water constantly decreases. In the process of sloshing the liquid onto the unit being cleaned a large part of the solution is wasted and only a small amount reaches its objective.

To eliminate these undesirable features Mr. Perry designed a brush mounted in a wooden head in which the bristles were placed at intervals specifically calculated to do a scrubbing instead of a swabbing job. When the bristles were positioned in this manner it was found that even the small amount of cleaning solution carried by ordinary brushes was lost. Accordingly a small hose with a "blade" nozzle was provided which fed a constant supply of cleaning solution at a constant temperature. Although this allows a satisfactory cleaning operation to be carried on it demands the employment of both of the operators hands. Many cleaning jobs require a long handled brush and the operators hands are taken up merely handling the brush, let alone directing a hose at the same time. The answer to this one was found in a solution fed brush. At first glance there is nothing particularly unusual in this brush except possibly its lightweight metal construction. Actually the brush is a carefully thought out instrument, with bristles placed at precisely the right intervals and of such a length and material as to give a maximum of scrubbing efficiency. The solution is fed to the brush through the long handle which is attached to a light hose. A push button valve that can be operated by the workman's hand is located near the end of the handle. The brush is refillable so that the bristles may be replaced when worn. The characteristic features of cleaning solution economy, ease of operation and efficient, cleaning are apparent in this brush as in all of the other Perry designed implements.

There are other brushes in the process of development which include a unit for tank car cleaning, a solution fed hand brush, and brush for cleaning vats where the workman does not get into the vats to clean them.

The process of developing the cleaning aids involved building experimental models and then working units which were placed in various Sealtest plants for testing under actual working conditions. Sheffield's 57th Street plant in New York City is equipped with a complete set of the new cleaning devices and reports extremely good results. As a matter of fact wherever the new cleaning instruments have been introduced they have been enthusiastically received. Perhaps even more impressive than the records of economy and efficiency that have resulted from their employment has been the improvement in plant workmanship and morale. Dry floors, a good housekeeping complex among workers, a better cleaning job are the inevitable product of these devices.

Mr. Perry is emphatic in his warning that these models are built to careful specifications and that in order for the cleaners to give satisfactory results the specifications must be followed exactly.

Food Industry Meeting Scheduled

Plans have been completed for the second annual Food Industry Exposition on the Atlantic City Steel Pier to be held January 18-21, 1948, inclusive, concurrently with the big food trade meeting of the year.

BE PREPARED!

"SALES depend on consumer approval."

BE PREPARED!

"NOG products have consumer approval."

NOG, INCORPORATED, DUNKIRK, N. Y.

★ Chocolate Milk Base Concentrates
★ Chocolate Fountain Syrup
★ Dipping Chocolate
★ Chocolate Ice Cream Flavoring
★ Sweetened Orange Drink Base
★ Chocolate Coating
★ Chocolate Fudge Topping
★ Coffee Ice Cream Flavoring

★ ★ ★

"There is no substitute for NOG QUALITY and SERVICE

The Food Industry Exposition will again be arranged to provide the means of contact between manufacturers and processors with the thousands of wholesale grocers, chain store and super market buyers who will visit Atlantic City in January. The 1948 industry get-together promises to attract a throng in excess of the 22,000 food industry executives who attended the last convention.

The exposition will feature new or unusual products available for distribution in the grocery industry. Special departments have been set aside for both Canned Foods and Frozen Foods to acquaint food trade people with the latest developments in each field. Large displays of food store equipment will comprise other important features of the exhibit.

The Food Industry Exposition will time its daily sessions so as not to conflict with the meeting hours of the various trade conventions in session during the week. The feature will enable volume grocery buyers to obtain maximum benefits in the limited time available.

Many novel features will be included in the program. "Carnival Night at the Convention" will again be a feature of The Food Industry Exposition with an all-star entertainment program to be presented on the Steel Pier on Sunday evening.

Leading wholesale grocers, chain store and super market buyers will take an active part in the formation and direction of the general program for the purpose of increasing last year's record attendance.

The event will be staged under the direction of David M. Sloane who conceived and directed the initial Food Industry Exposition.

●

Short Courses at Georgia

Athens, Ga.—The sixth annual Dairy Manufacturing Short Course will be held at the University of Georgia November 18-19, announces Professor H. B. Henderson, Head of the Dairy Department. This course is designed for people engaged in the processing and distribution of market milk and ice cream.

The fifth annual Dairy Production Short Course will be offered at the University January 15-16. This course will be of primary interest to dairy farmers, field men, county agents, vocational teachers, feed manufacturers and others interested in dairy cattle and milk production.

The faculties for the courses will be composed of noted authorities in these fields. They will include professors from some of the leading dairy schools of the country as well as outstanding men engaged in commercial work.

National Organization Acts to Hold Market for Dairy Products

The Board of Directors of the National Dairy Council recently met in Chicago and approved an increased budget for Dairy Council promotion for the fiscal year 1947-48. These industry leaders, realizing the urgent need for this specialized promotion to hold and increase consumption gains for dairy products, had no hesitancy in approving a recommendation of the finance committee and in urging the entire dairy industry to participate.

Reading from left to right, the members are:

Standing: Paul Reinhold, President, Foremost Dairies, Inc., Jacksonville, Fla.; Dr. Robert Prior, Treasurer-Manager, Washington State Dairy Products Commission, Seattle; and Ridgeway Kennedy, Vice-President and General Manager, Eastern Division, Abbotts Dairies, Inc., Philadelphia.

Middle Row: W. J. Swayer, President, Pure Milk Association, Gurnee, Ill.; Arthur F. Kerckhoff, Vice-President, Pevely Dairy Company, St. Louis; Wilbur Carlson, Kraft Foods Company, Chicago; George F. Gallagher, President, Krimko Company, Chicago; Charles R. Haller, General Sales Manager, Beatrice Foods Company, Chicago; G. E. Wallis, President and General Manager, Creamery Package Manufacturing Company, Chicago; W. A. Wentworth, Borden Company, New York City; F. J. Bridges, retired, new Honorary Director for life, Winnetka, Ill.; E. W. Tiedeman, General Manager, Grade A Co-op, Appleton, Wis.; and President Milton Hult, Chicago.

Front Row: Russell Wilhelm, Manager, Dairy Container Division, Owens-Illinois Glass Company, Toledo; Folmer Hansen, Second Vice-Chairman, Iowa Dairy Industry Commission, Cedar Falls; N. R. Clark, Vice-President, Swift & Company, Chicago; C. H. Haskell, President, Beatrice Foods Company, Chicago; Dan T. Carlson, President, American Dairy Association, Willmar, Minn.; and H. Stanley Wanzer, Vice-President, Sidney Wanzer & Sons, Chicago.

THE TUCKER ON DISPLAY

Chicago, Ill.—Thousands of American motorists are now seeing the revolutionary rear-engine Tucker '48 automobile for the first time as it is being placed on display in major cities throughout the country.

Quantity production is expected within a matter of months in the huge Tucker plant in Chicago, which produced B-29 engines during the war.

The Tucker '48 is a radical departure from anything yet produced by American auto manufacturers, and features a 150 horsepower horizontally opposed engine mounted directly between the rear wheels. Weighing under 3,000 pounds and having some 800 fewer parts than most other automobiles on the market today, the car gets up to 35 miles on a gallon of gas at moderate driving speeds, according to company engineers.

Mechanical features which differ sharply from those of conventional automobiles include:

1. Torque converters which eliminate the conventional clutch, transmission and differential, and apply direct power to the wheels from the rear engine.

2. Precision balance achieved by lowering the frame and centering of the steering kingpin in the center front instead of at the side of the engine.

3. Aluminum, air-cooled single disk brakes, tested and used for years on the Indianapolis speedway, which bring the car to a halt in 63 percent of the space required by cars equipped with conventional brakes.

4. Individual wheel suspension which allows for cushioning of the wheels by resilient action arms, actually eliminating shock instead of softening it.

5. Elimination of the conventional metal instrument panel in favor of an attractive sponge-rubber "crash-pad" cowl.

6. Construction beneath the padded cowl of a "safety chamber," made possible by the rear engine and lower frame. This space permits front seat passengers to duck into the chamber, safest place in the car, behind heavy steel bulkheads, in event of an impending collision.

7. Use of a safety-glass windshield, rubber-fastened in a sturdy frame, so that hard pressure from within will actually push the entire windshield out. Tempered glass in the windows disintegrates under hard impact without cutting edges or slivers.

8. Use of a third headlight, the "Cyclops Eye," a central light which turns with the wheels, lighting the way around curves to make night driving safer than heretofore believed possible.

Tucker said although his new '48 will be one of the smartest cars on the road, his fundamental concern has been for safety and trouble-free performance, with rakish lines and low silhouette secondary in importance.

●

METALLIC SOAP PRICE CUT

A virtual across-the-board price reduction of approximately 9% on metallic soaps was announced recently by Metasap Chemical Co., Harrison, N. J., subsidiary of Nopco Chemical Co. This reduction, effective July 24, 1947, represents the third such cut in metallic soaps since mid-April, bringing current prices about 20% below the level of early April.

O. E. Lohrke, general manager of Metasap Chemical Co., said that the current price reduction, like previous cuts, is being made despite continued broad demand for metallic soaps, used as flatting, waterproofing and plasticizing agents in the paint, petroleum, rubber and other basic industries. It constitutes, he said, an effort on the part of Metasap to pass along to customers the benefits of reduced production costs.

Miami Convention

(Continued From Page 22)

During the week photographic displays dealing with dairying and the dairy industries of many countries will be set up at the Robert Richter Hotel adjacent to registration and information headquarters.

Dairy Industries Society, International came into existence when more than 22,000 persons from some 25 different countries identified with dairy enterprises were registered in Atlantic City, New Jersey, U. S. A., as delegates to conventions of MIF, IAICM, International Association of Milk Sanitarians, and National Association of Retail Ice Cream Manufacturers, or as qualified visitors to the International Dairy Industries Exposition then in progress and under the sponsorship of DISA.

Tentative DISI Schedule

MONDAY

Forenoon: Observation of Collegiate Students' International Contest in Judging Dairy Products
Afternoon: Motion picture showings

TUESDAY

Forenoon: Tour of nearby modern dairy farms
Afternoon: Meetings of:
Membership Committee
Finance Committee
Speakers Bureau
Board of Directors
Evening: Presentation of awards for Students' Contest at dinner arranged by International Association of Ice Cream Manufacturers

WEDNESDAY

Forenoon: Business meetings, including election of officers and directors.
Noon: Luncheon, including presentation of world dairy outlook and introduction of dairymen from abroad
Evening: Held open for attendance at annual banquet of International Association of Ice Cream Manufacturers

THURSDAY

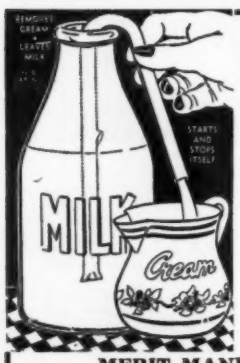
Forenoon: Seminars by the following committees, with attendance open to all DISI members:
Committee on Area Development
Consumer Education Committee
Exhibits Committee
Noon: Luncheon, followed by a panel discussion of delivery prospects for equipment and supplies used in dairy farming and dairy processing
Afternoon: Seminars by the following committees with attendance open to all DISI members:
Technical Committee and Publications and Products Subcommittees
Committee on Standards Terminology
Evenings: Dinner, summarizing DISI meetings, pointing the way to the future, and featuring an outstanding speaker

FRIDAY

Forenoon: Tour of nearby modern dairy plants
Afternoon: Motion picture showings
Evening: Held open for attendance at annual banquet of Milk Industry Foundation

ALL WEEK

Registration and informal conferences at information center in the Robert Richter Hotel
Photographic displays telling the story of dairying, country by country.



NEW — USEFUL — INTERESTING

Magic Cream Siphons, for home use, remove cream from bottled milk, for use with coffee, cereals and desserts.

Leading dairy firms find Magic Cream Siphons a welcome sale booster aid. Thrifty housewives appreciate them and every home using our cream siphon will consume more milk—the best balanced and least expensive of natural foods.

Free sample for round or square bottles —two models are made.

$12.50 per gross $83.00 per 1,000

Complete satisfaction guaranteed.

MERIT MANUFACTURING COMPANY
3455 EAST 150TH STREET CLEVELAND 20, OHIO

Good Brushes Are Important!!

— That's Why Dairymen from Coast to Coast Are Specifying *E-Mac* Brushes.

A Brush for Every Dairy Need

WRITE FOR CATALOG NO. 12
DESCRIBING OUR COMPLETE LINE

E-Mac DAIRY BRUSH CO., Reading, Pa.

Teach 'Em To Sell

(Continued From Page 30)

tomers; "Follow Up the Hot Ones", a course in developing information about prospects and using it in sales interviews; "Stumbling Blocks or Stepping Stones" helps the sales force learn how to turn complaints into loyalty.

The Balanced Job material is essentially the boiled-down experience of successful sales executives and salesmen in the fluid milk distributing industry. It contains the known and sure-fire methods of getting business and stimulating more men to do a better job. New material is now being worked out to add to the sales training course, and this will cover among other things selling factors in the wholesale business.

The fact that the Milk Industry Foundation had this complete sales training program ready and available for its members when the need for it arose emphasizes in the opinion of industry leaders the importance of the industry's national trade association. The sales program alone is the type of project that an individual company would not carry out on its own.

Along with the sales training courses that are available for members, a widening interest in public relations activities of the Foundation has been of inestimable value to its members in the postwar changes. The Foundation provides its members with material for consumer, producer and labor relations work that can be used locally. This type of material is only one phase of the general national public relations program which has been carried on regularly by the Foundation.

This program has provided the industry with material showing how milk is one of the most economical foods today. Through its news releases, publications, films and other media, the Milk Industry Foundation is the voice of the fluid milk distributing industry. It also translates to its members information relating to the rapid-fire changes that take place in the consumer world and helps milk company executives keep in touch with the shifting tides of public opinion.

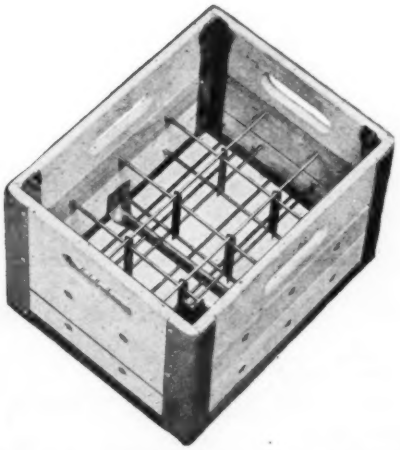
Officers and directors of the Milk Industry Foundation are: Raymond Skinner, Forest Hill Dairy, Memphis, President; Francis H. Kullman, Bowman Dairy Company, Chicago, Vice President; E. N. Brawner, Chestnut Farms-Chevy Chase Dairy, Washington, Treasurer; F. B. Baldwin, Baldwin Dairies, Philadelphia; G. W. Barber, Barber Pure Milk Company, Birmingham; Bryan Blalock, The Borden Company, Marshall, Texas; J. H. Duplan, Silverwood Dairies, London, Ontario; T. Kline Hamilton, Diamond Milk Products, Columbus; H. P. Hood, H. P. Hood & Sons, Boston; T. D. Lewis, Arden Farms Company, Los Angeles; A. G. Marcus, Dairymen's Association, Honolulu; W. H. Marcussen, The Borden Company, New York; C. B. Martin, Durham Dairy Products, Durham; A. C. Merrill, Cloverleaf Dairy, Salt Lake City; W. C. Riedel, Sanitary Farm Dairies, St. Paul; E. E. Stewart, National Dairy Products Corporation, New York. Operating executives are Col. B. F. Castle, Executive Director and E. B. Kellogg, Secretary, 1001 15th St., N. W., Washington, D. C.; Charles Speaks, Chrysler Building, New York, Director of Information.

●

STUDIES FOOD MARKET

Safe arrival in Europe of Mr. Murray B. Weil, Vice President and General Manager of June Dairy Products Co., Inc., and Blue Moon Foods, Inc., was announced by Mr. N. W. Bandler, President of June Dairy. Mr. Weil is touring the important food markets in Europe, studying foreign demand and seeking food specialties that are of suitable quality for import into this country. His visit will be concentrated mainly in France, Italy, Switzerland and the Netherlands with an eye to supplementing the extensive and varied line of June Dairy Food Products, Inc., one of the country's largest food suppliers, and caterers to famous hotels and restaurants.

Baker is Back!



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100% DELIVERIES IN SEPTEMBER

The largest, most modern dairies in the United States recognize BAKER CRATES as quality leaders and accept no substitutes.

Territories now available. Write for BB-10

ROUND, SQUARE, AND PAPER MILK BOTTLE CRATES

Since 1858

BAKER BOX INC. WORCESTER 8, MASS.

HER IDEA BUILDS BETTER DAIRY HERDS

From the Ends of the Earth Come Ideas that Help Produce a Better Industry — The Story of a Danish Contribution to Dairy Progress in the United States

By Harold W. Baldwin

A LITTLE MORE THAN fifty years ago Mrs. Frederik Hansen, the wife of a creamery manager in Denmark, conceived an idea to help her neighboring farmers make their dairy herds more profitable. Today, not only Danish farmers but farmers in the United States and in several foreign countries are her beneficiaries. Many of them have never heard of Mrs. Hansen. But her idea has taken much of the guess-work out of their business of milking cows. It has given them better-producing herds and a better dairy income.

In Denmark some fifty years ago only farmers with large herds could afford to hire someone to do the butterfat testing and the record-keeping that would tell them with certainty which of their cows were paying for their keep. The small farmers had to depend on their own judgment, unsupported by facts. And so they, too, needed that accurate information if they were to intelligently feed their herds, weed out the boarder cows and plan constructive breeding programs.

Mrs. Hansen recalled that a few years earlier fourteen patrons of her husband's creamery had replaced their unsupported judgment with accurate figures on their herds. They had accepted his suggestion to weigh the milk of each of their cows and bring in samples so that he could test them for butterfat. He also figured the amount of feed consumed, thus enabling those fourteen patrons to determine their production costs. If the small farmers could do something like that, do it regularly and at a cost they could afford, Mrs. Hansen must have thought, they could know instead of guess which cows were the loafers. Then those poor producers could be removed and the herds made more profitable. Why not form an association and hire someone to do the testing and keep the records?

Cow Testing Association Born

Perhaps Mrs. Hansen did not broach the idea to her neighbors in exactly those words; perhaps it was not even in the form of a question. But whatever the method, they believed it was worth trying. And so in 1895 they formed a cooperative cow testing association and employed a tester to carry on the work.

Within a few years the idea had spread to other European countries. Then it crossed the ocean to land on fertile soil in Fremont, Mich. There, in December 1905, Helmer Rabild, a young man who knew the value of the program in his native Denmark, organized 31 dairy farmers into the Newaygo County Dairy Testing Association. Next came the problem of finding a tester. It must have been like looking for a needle in a haystack, since there were no other associations in this country to train men for the work. But through an advertisement in a dairy magazine a man who had had experience with the program was discovered – working in a Connecticut jewelry shop!

There were 239 cows on test that first year, their owners agreeing to pay one dollar per cow per year for the testing service. Those 31 Newaygo county pioneers must have had some misgivings in their minds when they decided to put that new idea to work, even though the Danes had used it successfully for ten years. But whatever their doubts they did not long continue. At the end of the fourth year the records showed that they had doubled their average profit per cow.

Remarkable Growth

Today, in 44 states, there are local associations patterned after those first ones in Denmark and Michigan. Some 1100 in all, with nearly 25,000 members, they are keeping accurate feed cost and production records on more than 400,000 cows.

Each month the tester spends a day on the farm of each member in his association, usually arriving in time for the evening milking. He weighs the evening production of each cow and takes a sample of her milk. The next morning he again is out in the barn with the farmer, weighing and sampling the morning production. Later he determines the butterfat content of those samples with his portable testing equipment. It takes about an hour to test the samples of a 24-cow herd. After that comes the bookkeeping part of his job. He computes the milk and fat production and the grain consumption for each cow during the month and enters the figures in the farmer's record book. Then he is on his way to the farm of another association member.

Cow testing associations, as they were first called, have increased in usefulness as the program developed. In the beginning the records served simply to weed out the unprofit-

FOR A DEPENDABLE SOURCE OF HIGH QUALITY DAIRY PRODUCTS, CALL US.

MILK	BUTTERMILK
FRESH CREAM	DRIED SKIM MILK SOLIDS
FROZEN CREAM	SWEETENED SKIM CONDENSED MILK
SOUR CREAM	ICE CREAM MIX
COTTAGE CHEESE	BAKERS CHEESE
BUTTER	PLAIN SKIM CONDENSED MILK

GRANDVIEW DAIRY, Inc.

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PLANTS AT:

Arkport, New York — Bear Lake, Pennsylvania — Cohocton, New York — Neenah, Wisconsin

able producers. But as their value became more widely records also are used as a guide for feeding each cow according records also are as a guide for feeding each cow according to her production. And they help farmers plan breeding programs by indicating which herd sires and cows have the ability to transmit better production to their offspring. The name, too, has changed. Today they are known as dairy herd improvement associations and the testers are called supervisors. But many farmers still use the old titles.

Testing Pays Dividends

DHIA farmers spend more than a million dollars a year in association fees for the service that gives them those accurate records. But it is an investment that pays dividends, such as the one received by a New Jersey farmer who discovered he could save a ton of grain a month because he knew instead of guessed the production of each cow in his herd, and fed accordingly. Vermont members have an income per cow that is about 30 percent higher than that of non-member farmers in the state. A Wisconsin's farmer's records told him that his sire had decreased his herd's butterfat average by 179 pounds in two years. Without the figures the decrease might have been greater before he could have discovered the cause.

And the records show that the DHIA herds are steadily bettering their own production. Twenty years ago only a little more than half of the cows on test produced more than 275 pounds of butterfat per cow per year. Today about 75 percent of them are in that higher production bracket. In 1946 the DHIA cows set a new high average: 8592 pounds of milk and 346 pounds of butterfat. In comparison, all dairy cows on U. S. farms produced an average of only 4789 pounds of milk and 190 pounds of fat per cow. The records show, too, that as fat production increases, the greater is the financial return above the cost of feed.

That Newaygo county association is still testing cows for its members. Only once has its forty years of service been interrupted, and that was for a period during the first World War when its supervisor entered military service. Today there is a marker on the grounds of the Grange Hall in Fremont that commemorates its organization, the first expression in this country of Mrs. Hansen's idea. It was placed there on the Association's fortieth anniversary last December by Dr. O. E. Reed, chief of the Bureau of Dairy Industry, U. S. Department of Agriculture.

Mrs. Frederik Hansen simply wanted to help her neighboring farmers make their herds more profitable. But her idea has developed to an extent far greater than she ever dreamed it would. Its influence in improving the dairy herds in this country has been tremendous.

Aftosa-Mexican Tragedy

(Continued From Page 5)

A fleet of 12 trucks, carrying speakers, record players, and public address systems began information work in areas that are, or will be, centers of eradication work. Four of these trucks are now working along the northern boundaries of the disease in the States of Michoacan, Guanajuato, and Queretaro — and around Tampico. Seven are traveling in the central and southern areas of the main infected zone, and one is held in Mexico City for assignment to areas where misunderstanding may handicap eradication work.

About 100 broadcast records have also been made and distributed to Mexican radio stations. These records, made by the Mexican government, explain the menace of the disease and the reasons for slaughter of all diseased and exposed animals.

Now being prepared by the Ministry of Education is a series of posters to be put up in public gathering places throughout the infected area. Another aid is a motion-picture

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PLANT MAINTENANCE ENEMIES
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LIQUID PORCELAIN-LIKE
DAMP-TEX
AMP-TEX
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Damp-Tex super-enamel can be applied to surfaces despite moisture, heat, fumes and many other extreme conditons. Its water-proof film retards deterioration, increases efficiency, turns depressing, dingy interiors into gleaming, porcelain-smooth beauty. Resistant to fungus, 2% caustic solution, steam and lactic acid. One coat covers. Comes in white and colors. Used in over 4000 plants. Write for our trial offer.
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National Dist. of Damp-Tex Products to the Dairy Industry
General Office: 1243 W. Washington Blvd., Chicago
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Canadian Manufacturer: Standard Paint & Varnish Co., Windsor, Canada

Profit Opportunities IN CONDENSED MILK PRODUCTS

Farsighted managers agree that product diversification is the soundest, most stable and profitable basis for expansion. Condensed whole milk, skimmilk, and ice cream mix are bringing extra volume and extra profits to dairy plants large and small throughout the nation. The installation of a Rogers Vacuum Pan means new sales possibilities and a constantly growing, more profitable business for you. We'll gladly cooperate in analysing your marketing opportunities and why you can count on premium earnings with Rogers equipment.

"The Choice of Dairyland" Since 1883.. Rogers

C. E. ROGERS COMPANY, 8731 WITT ST., DETROIT 9, MICH.

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Reg. U. S. Pat. Off.

TECHNICAL SPECIALTIES FOR IMPROVING YOUR PRODUCTS

'FRIGIDRY' DAIRY CULTURES—6 TYPES

Trade Mark

Vigorous, rapid growing, easy to use. Repeated transfers unnecessary, saving several days' time. Uniformity assured and high viability retained by sub-zero, high-vacuum drying process. Each type tailor-made for its purpose.

'PROVALAC' CAROTENE DAIRY EMULSION

Reg. U. S. Pat. Off.

Convenient, economical method of fortifying ice cream and milk with Vitamin A activity—automatically produces desirable carotene or "June" color. Contains no fish oils. No special equipment required, blends easily with simple agitation.

'YELLO-A' CAROTENE BUTTER COLOR

Trade Mark

Colors your butter the natural way with carotene—the same color nature supplies when cows are on green pasture—also supplies natural vegetable Vitamin A activity—no fish oils or added artificial color used. Ideal for cheese also.

'BODY-GUARD' ICE CREAM STABILIZER

Trade Mark

New, different, more efficient—the stabilizer that economically produces the better quality ice creams, builds consumer appeal and increases your sales. High active ingredient content, properly blended to give maximum results.

Write for literature and prices

GENERAL BIOCHEMICALS, INC.

25 LABORATORY PARK • CHAGRIN FALLS, OHIO

film on the disease and the benefits to be derived from its complete elimination. The film will be shown throughout the Republic.

Despite the contant danger that the Mexican infection holds for livestock in the United States and in the face of a bewildering slaughter of Mexican herds the program of eradication appears to be building a definite sense of goodwill between the United States and Mexico. Prompt payment of fair appraisals, adequate educational programs that show the necessity for the drastic measures employed coupled with the thorough going cleaning operations are primarily responsible for the success of the public relations phase of the operation. Mexicans have come to refer to the campaign as the "sanitary rifle" and in many cases have expressed great delight at the sparkling appearance of their premises after the cleaning crews have finished their task. The need of replacing oxen with more modern power sources and the general influence of agricultural experts from the outside will probably work a minor revolution in Mexican agriculture.

Yet still the slaughter must go on along a dozen different fronts. Still the melancholy sight of drovers herding cattle to their common grave must mark the Mexican countryside. Not until the sharp crack of the "sanitary rifle" is brought to a successful silence can the livestock and dairy industry in the United States feel free from the invisible menace that grips the unfortunate herds of our Southern neighbor.

●

As a sequel to the "Review's" story on the foot and mouth disease there comes a report from the Associated Press of a disaster that speaks eloquently of the difficulties the task of eradication entails.

Mexico City, Sept. 2—"Thousands" of farmers stabbed to death six Mexican soldiers and a veterinarian yesterday as the group entered the mountainous region of western Michoacan State to inspect cattle for the hoof and mouth disease, it was learned today. The farmers apparently acted in fear that some of their cattle would be found infected and would be slaughtered by the army captain and six soldiers conducting the veterinarian on his rounds.

One Mexican soldier, the only person to survive the massacre, escaped, although badly wounded, and reached a military post at Zitacuaro, where strong detachments of troops were sent out to round up the farmers. The attack occurred near the village of Ciudad Hidaglo.

The Mexican Veterinarian, Agusto Suarez Medina, had called a meeting yesterday to explain the nation's current campaign against the dread cattle disease and the need for killing infected animals, and to tell the farmers that the government would pay on the spot for animals slaughtered.

The soldier who escaped said the mob lay in ambush, rushed on the detachment of eight persons and quickly disarmed the soldiers.

●

North Carolina Association

Atlantic Beach Meeting Attracts More Than 100 Dairymen

Public Relations, Industry Cooperation Stressed

More than 100 members of the North Carolina Dairy Products Association attended the annual summer meeting held at Atlantic Beach, Morehead City, North Carolina on August 21 and 22.

Members, wives, and guests enjoyed ideal weather that found business sessions conducted at the Surf Club and a chartered vessel providing a recreational tour of the inland waterways on Bogue Sound.

Business sessions of the conclave were presided over by

Ralph H. Scott of Burlington, president of the Association.

Principal speakers included W. D. Carmichael, Jr., controller of the University of North Carolina, George L. H. White of Raleigh, James E. Jackson, Executive Secretary of the Georgia Dairy Association, Dr. H. J. Rollins, chairman of the new North Carolina Milk Commission, E. A. Resch, president of the North Carolina Press Association, Hon. J. Melville Broughton, former governor of North Carolina, Ernest Schuchard of Durham, and C. H. Willard of High Point.

Theme of the meeting was the need for more adequate understanding of dairy industry problems and values by the general public plus a plea for cooperation by members of the industry. E. A. Resch struck home with an arresting speech that sounded the keynote of the meeting.

"In addition, the consumer needs information to offset the situation created by recent unfavorable publicity." Mr. Resch said, "As a general rule the public will believe bad rather than good, and it is largely the fault of the dairy industry itself that a misconception of its motives and practices was general. The industry failed to inform the editors of its angle of the story. Newspapers themselves will not undertake a crusade for the uplift of the dairy industry, but I believe you will find that they will work with you. I am thoroughly convinced that the men engaged in the industry are fundamentally sound and honest. So work out your public relations program in order that the public may be informed of the true facts of the problems you face—then come to the newspapers. You will find them most co-operative."

At the board meeting it was voted to hold the next annual meeting at the Hotel Sir Walter in Raleigh, January 15-16, 1948.

●

ARE YOU A DAIRYMAN?

The following questions are not easy. If you can answer five you are pretty well informed. If you can answer eight you may give yourself a deserved pat on the back. If you can answer all of them you may consider yourself a dairyman.

1. Why does subjecting milk to high temperatures result in the elimination of the cream line?
2. Is the foot and mouth disease fatal to dairy cattle?
3. Who owns the Golden Guernsey trade mark?
4. What war time innovation in milk distribution has been highly intrumental in keeping the the price of fluid milk below the all foods level?
5. What is the effect of lactic acid on concrete?
6. What is the date for the First Annual Dairy Industry Society International Convention? Where?
7. What is a satisfactory material for covering hose and similar pieces of equipment that is resistant to mild acids?
8. What is Bovine Mastitis?
9. Is the cow population of the country increasing or decreasing?
10. What is the average number of quarts of fluid milk sold daily in the United States?

Answers on page 68.

You are invited to send in questions for the ARE YOU A DAIRYMAN column. For acceptable questions that are published the *American Milk Review* will pay one dollar apiece.

THE ERICKSON MILK CASE

REDUCES
Refrigeration
COSTS

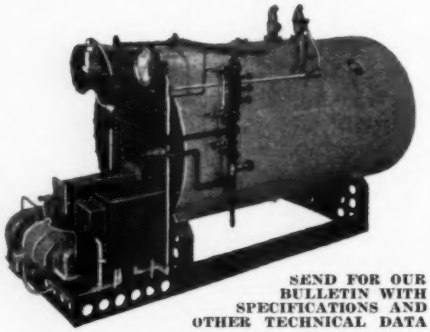
Reaches safe temperature 2 hours faster — no heat moisture to combat — comes out of washer into cooler at practically room temperature.

Instead of running their refrigeration unit 'round the clock, some dairies have found it possible to run only part time — at a big saving.

All-Aluminum
The Case With Extra Years of Low-Cost Service "Built-in"

C.E. Erickson CO., INC.
DES MOINES, IOWA

STEAM
AT LOW COST



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MODEL OB-EM

This generator is compactly mounted in one unit. Operation is automatic, clean, and efficient.

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BEFORE AFTER

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Repair rutted, cracked, broken floors—without losing a minute of valuable production time. Cleve-O-Cement dries rock hard overnight; harder in 24 hours than ordinary cement in 28 days.

Cleve-O-Cement is NOT an asphalt composition. Its entirely different molecular formation binds into surrounding concrete, and will not crack, chip nor shrink away. The smooth, non-porous, but slip-proof surface is unaffected by freezing temperatures, and resists attack by oils, grease, live steam, lactic and carbonic acids. Time tested in thousands of Dairies, Refrigerator Rooms, Laundries, Dry Cleaning, Meat Packing, and Bottling Plants throughout the country.

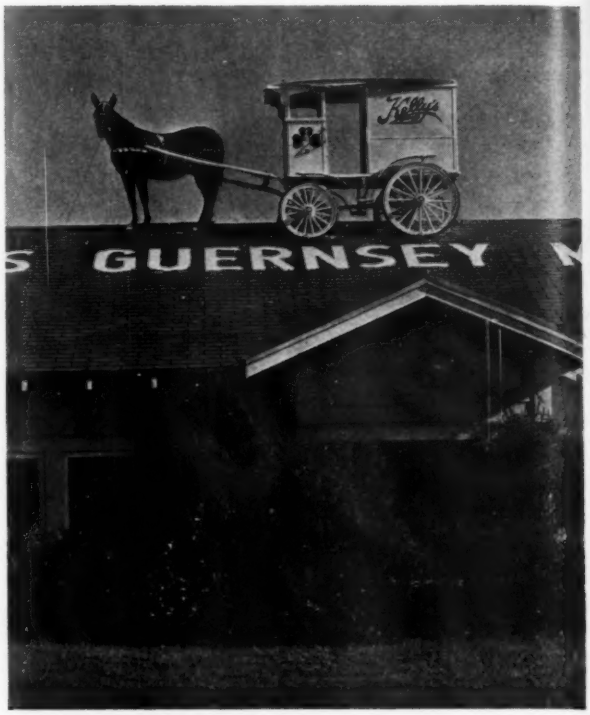
We can now accept orders for HySpar Sanitary White Enamel, Motor and Machinery Enamel, Aluminum Finishes.

Write for Our Free Test Offer and Illustrated Literature

THE MIDLAND PAINT & VARNISH CO.

9100 Reno Avenue **Cleveland 5, Ohio**

Don't Know How But It's There



The Kelly Dairies of Beaumont, Texas, have adopted a novel method of advertising milk and their milk delivery service. This unique display, mounted on the roof of one of their plants has attracted wide attention as well it should. Pity the poor man on his way home in the morning who spies the milk man on the roof instead of the door step. The wagon is a regular delivery vehicle carrying the company's name. As for the horse, few kingdoms could be won with this fair steed but customers—well that's another thing.

Progress in Dairy Promotion

California Organization Active in Spreading the Good Word By Advertisements, Motion Pictures, Research

Totaling figures for the 1946-1947 fiscal year in preparation of a report to its 25,000 members, the California Dairy Industry Advisory Board revealed the following achievements, according to chairman Alfred M. Ghormley. More than six million pieces of educational material distributed (6,091,023 to be exact) in response to 18,389 requests, compared to 314,000 pieces and 2,000 requests last year; more than 12 million impressions of advertisements in newspapers (circulation). Research projects increased from seven to ten; films sponsored by the board were shown to 173,000 children and adults. Personal contacts with key persons in fields of education and promotion ran into thousands.

"A survey of requests and letters of appreciation shows that we have reached an astounding variety of interests," commented Ghormley. "It represents a cross-section of society in this State from public, private, church and specialty schools to industrial, professional, commercial, neighborhood, health, civic and welfare groups.

"One of the most gratifying outcomes for the year is the steadily increasing use of the Advisory Board materials and services by dairy producers and distributers. This cooperation from the industry itself is necessary to achieve full benefit of the program for which the board was created."

Your Ambassador — the Milkman

Albert L. Easterly, a Californian, admits that it rains in the land of milk and honey, but also points out that it is THE LITTLE THINGS THAT COUNT.

The important issues, that which we are paid to do; those things expected of us – we try to perform. But the little extras, that not expected of us, we conveniently ignore.

Early one Sunday morning, this was brought vividly to my attention. It was beginning to rain, so I arose to pull down the window and I saw our milkman drive up. I knew he was our milkman because, although he was a new man, I recognized the truck.

He climbed out of the truck with our order in his hand and started toward the porch. The newsboy had been around earlier and had dropped the morning paper in the pathway. I saw our new milkman stop, pick up the paper, and bring it along with him to the porch. That was a thoughtful gesture on his part, I concluded, especially when it was raining.

Our milkman had hardly pulled away from our house when I saw his competitor stop across the street to make a delivery. I watched to see if he, too, would pick up the newspaper, thinking it might be a special service established by all dairies, but that was not the case. This man not only ignored the newspaper; he actually kicked it while walking toward the porch.

Now mind you, it is not the milkman's duty to deliver morning newspapers to a safe repository convenient to the householder, nor should he take the time to hunt for it under bushes, behind trees or on porch roofs. His business is to deliver milk. But when the newspaper is conveniently at hand – and it is raining – and without the hope of reward (the customer not watching) – it is the exceptional milkman who will stoop to pick it up.

Our man didn't stop at that. When it wasn't raining, I continued to find our morning paper on the porch alongside the milk bottles. Then one day my turn came.

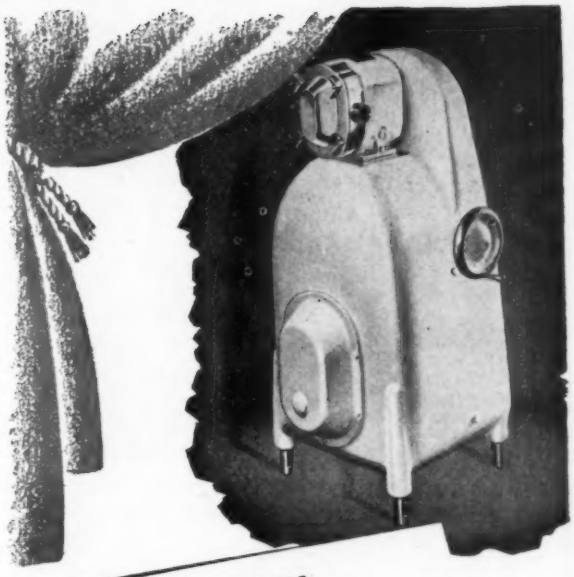
The competitor came to our door soliciting business and asked if we would change. He painted a flowery picture of his dairy and the richness of his product and that he had a service our milkman did not have. He could supply us with canned orange juice right to our door each morning.

I have no doubt this man was working for a good dairy and he was certainly enthusiastic. But I would not consider making the change. Any organization employing a man as thoughtful and considerate as our milkman must be an outstanding concern and they are welcome to our business – such as it is – on general principles.

Yes, it's the little things that count – the big things will take care of themselves.

Seasonal Price Rise

Fluid milk prices rose seasonally at both retail and producer's levels during early August as milk production continued its seasonal decline, according to the United States Department of Agriculture, Bureau of Agricultural Economics. Price increases occurred in about one in every six markets reporting, principally in New England, Middle Atlantic, and East North Central regions.



WAUKESHA
Introduces the Revolutionary
New
"Selectaspeed" Pump Master
Variable Speed Drive Pump

Engineered By The Builders Of The Famous WAUKESHA 100% SANITARY PUMP — Field Tested—Approved By Leading Health Officials — Conforms To The Most Rigid Sanitary Standards.

NOW PUMPING SPEEDS can be accurately controlled for the correct minimum holding periods required for proper pasteurizing, by sealing easily at high-speed stops. The new WAUKESHA "SELECTASPEED" Pump Master offers you this accuracy of quality control — while making speed changes far easier. Belts can be changed by simply removing the back cover of "SELECTASPEED" Pump Master and raising motor to its highest point by simply turning the hand wheel. With a cast aluminum, degreased and white enamel painted case, and sanitary adjustable feet, the entire unit is enclosed — fully protected from moisture and vermin hazards, and in addition external sealing is provided.

NEW ILLUSTRATED FOLDER describing the WAUKESHA "SELECTASPEED" Pump Master will be sent you upon request.

WAUKESHA FOUNDRY CO.
Waukesha, Wisconsin

Waukesha 100% SANITARY PUMPS
Dependable Product of a Responsible Manufacturer

Gentlemen!

YOUR DOCTOR WANTS TO KNOW

Do your Producers test their cows regularly for Mastitis? Do they use the old "Strip-Cup" method, or, the new, up to date Brom Thymol Test, recommended by Veterinarians?

In other words can he prescribe your Milk with Safety? You know when the Doctor prescribes a Milk Diet for some anxious Mother's baby,

HE HAS TO BE SURE IT'S PURE

There are 60,000 Doctors in this Country. To these men Milk is the BEST FOOD IN THE WORLD. They KNOW its nutritional value and prescribe its use. They KNOW that Mastitis is a Disease of Dairy Cattle. They KNOW that a Quality Food Product can't come from the udder of a Diseased animal. They also KNOW that—

THE PASTEURIZATION OF MILK CAN'T CURE A SICK COW

Remember! The Doctor's good opinion of your product is a valuable asset to your business. SO BE SURE IT'S PURE. The "Strip Cup" is NOT a Test, that he, or your Producer, can depend on. To Safeguard the Quality of your Product, see that Producers make regular use of those fast acting, accuracy guaranteed—

KO-EX-7 Brom Thymol Mastitis DETECTORS

with the Green Spots. Keep a supply on hand for their use. Make the regular test of every cow a MUST. Be on the Doctor's PREFERRED LIST, not his BLACK LIST. If your Jobber can't supply you, write—

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DAIRY DIV. N-4 BUFFALO 3, N. Y.

MEDICALLY APPROVED

No milk **except**

Certified MILK

gives you the distinction of telling your customer you *voluntarily* submit to regulation of the Medical Profession.

THIS PRESTIGE INCREASES ALL YOUR SALES

Write now for information

AMERICAN ASSOCIATION OF MEDICAL MILK COMMISSIONS

1265 Broadway, N. Y. 1

Dealers' buying prices for approximately 125 cities during early August averaged $4.58 compared with $4.21 per hundred weight in August, 1946. Prices remain at the highest August level of record.

•

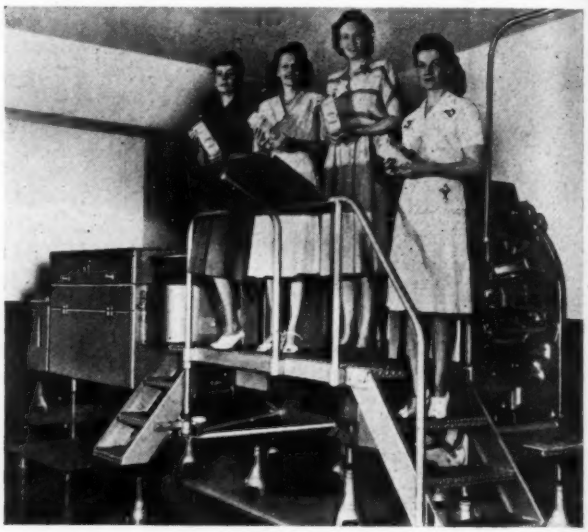
The Queen is in the Creamery

Four Detroit Sisters Own and Operate Successful Dairy Business in the Automobile City—Firm Is Using Paper Containers

ROSEBUD CREAMERY COMPANY, INC., well known Detroit Milk plant enjoys the unique distinction of being an all feminine enterprise. Described as "one of the oldest milk plants in Detroit" the firm is owned and operated by a quartet of charming and capable sisters.

President and Treasurer of the concern is Mrs. Alyce Saunders, Mrs. Margaret Rein, Vice-President and Secretary, Mrs. Betty Walker, cashier, and Mrs. Isabel Quigley, a director.

The plant is located at 2815 East Willis. Clements Philipski, for many years a prominent Chicago dairyman, founded the concern in 1904. Forward looking management



Four sisters, owners and operators of Detroit's Rosebud Creamery, stand on the platform of their newly-acquired Pure Pak packaging machine. The firm, one of the City's oldest, has recently gone in for paper containers for their products.

and a keen business sense carried the business through almost a half century of continuous progress. The plant serves a large area in greater Detroit and suburbs.

Rosebud Creamery is known to the retail food business in metropolitan Detroit as an outstanding supplier of dairy products in both quality and service. The firm has been quick to adopt new ideas and new techniques in the milk business. Recent developments have been emphasis on Vitamin D homogenized milk and the introduction of square glass bottles in the Detroit area. Latest of the sisterly ideas has has been the acquisition of a Pure-Pak machine built by Ex-Cell-Corporation of Detroit. The Pure-Pak machine forms square paper bottle from blank papers, sterilizes them, fills them with fresh, pasteurized milk or other dairy products, seals them, and codes them. The project calls for a comprehensive sales and advertising campaign to push Rosebud products packaged in paper containers. Supervision of sales is directed by Albert Franks who has been associated with the Company for many years.

42 Round - 69 Square

One of the features of the recent Dodge Truck and Special Equipment Exhibit held this July at the Michigan State Fair Grounds in Detroit was this up to the minute retail delivery truck body built by the Schnabel Company of Pittsburg.

Capable of handling either 42 cases of round bottles or 69 cases of squares the truck is equipped with sliding doors.

In addition to the milk delivery truck the Schnabel display included a retail bakery delivery body and a 910 gallon capacity refrigerated ice cream body.

●

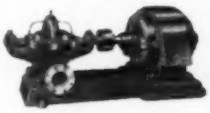
Pamphlets and Bulletins

Recent pamphlets and bulletins issued by commercial firms, Industry organizations, and Agricultural Colleges are listed below. These pieces of literature are available upon request to the issuing agency.

1. Air Conditioning In Candy Manufacture.....Price 20c
   The American Society of Refrigerating Enngineers, 40 West 40th Street, New York City.
2. Gravity Conveyor Catalogue.....No charge
   The Rapids-Standard Co., Inc., Grand Rapids 2, Mich.
3. Tax Outlook—About Congressmen. The July issue of a monthly publication on taxation.....$2.00 per year
   The Tax Foundation, Inc., 30 Rockefeller Plaza, New York 20, N. Y.
4. A Sample Flow Control Diagram for a Creamery.....No charge
   B/W Controller Corporation, 2200 East Maple Road, Birmingham, Mich.
5. Replacement Guide Book for B. F. Goodrich Light Duty Belts.....No charge
   also Industrial Fire Hose, B. F. Goodrich Company, Akron, Ohio.
6. Building Maintenance—a monthly two page bulletin dealing with building materials produced by the Truscon Laboratories, Detroit, Mich.
7. How to get clean bottles at low cost.....No charge
   Continental Equipment Corporation, 6103 North 76th St., Milwaukee 9, Wisc.
8. Hydraulic Operating Cylinders.....No charge
   Lee Metal Products Company, Inc., Philipsburg, Pa.
9. Portable Conveyor Power System.....No charge
   Food Machinery Corporation, Riverside, Cal.
10. Lithcote Linings.....No charge
    Lithgow Corporation, 333 West 40th Place, Chicago 9, Ill.
11. Alert "Hot Steam" Boiler.....No charge
    Alert Engineering Products Co., 315 West Woodbridge St., Detroit 26, Mich.
12. Modern Steel Barn Equipment.....No charge
    Barn Equipment Association, Board of Trade Building, Chicago 4, Ill.
13. Humidity Control.....No charge
    Kathabar Division, Surface Combustion Corporation Toledo 1, Ohio.
14. Truck and Car Body Booklet
    Hart Pressed Steel Corporation, Elkhart, Indiana
15. Low Temperature Insulation Techniques.....Single copies no charge
    Industrial Mineral Wool Institute, 441 Lexington Ave., New York 17, N. Y.
16. The Nutritive Value of Non-Fat Milk Solids.....No charge
    Cherry-Burrell Corporation, Chicago 6, Ill.
17. Markomatic Industrial Marking Machines.....No charge
    Adolph Gottschc, Inc., New York 13, N. Y.

Where there's a
PUMP in your Plan
SPECIFY
PEERLESS

For diversified, continuous duty services in industrial, chemical and process plants, etc., Peerless centrifugal pumps incorporate many proven design features for extended pump life, minimum down-time and operative economy. They are manufactured in an extensive series of advanced types, sizes and capacities up to 70,000 g.p.m. Request Bulletins.



TYPE A
General Service Pump

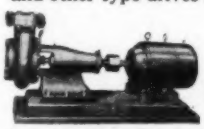
Peerless type A pumps afford top-flight, continuous duty operation with capacities from 50 to 70,000 g.p.m. Heads: 15 to 300 ft. All types of drives: 1 to 1000 h.p. Sizes: 2″ to 42″ discharge. Split-case, single stage, double suction type.

TYPE AF
Fire Pump

Peerless Underwriters' Approved fire pumps are available for all fire protection services. Capacities: 500 to 2000 g.p.m. Pressures: to 150 lbs. single and double stage types, for electric, engine, turbine drive or combinations.

TYPE B
Boiler Feed Pump

Peerless Type B multi-stage pumps are designed for boiler-feed, pipe line and refinery services delivering capacities up to 900 g.p.m. against pressures up to 700 lbs. For electric and other type drives from 60 to 350 h.p.



TYPE DS
Process Services Pump

Peerless Type DS is the ideal pump for chemical, oil, soap and similar process services. Capacities: 10 to 1500 g.p.m. Heads: up to 231 feet. Handles a wide variety of corrosive or non-corrosive liquids at temperatures of 200° F.; Single stage, single suction.

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PEERLESS PUMPS
FOR MOST SERVICES
IN ALL INDUSTRIES

BRITISH DAIRY NOTES

Latest expansion in the scheme of free distribution of milk to juniors in Britain is the introduction of increased quantities of free milk in nursery schools.

In an Education Department memorandum issued recently it was indicated that as from August 1st nursery school children will be given more milk. Each child will have two thirds of a pint free instead of the present one-third.

No application need be made by the school as a new permit will be issued automatically by the Food Office involved.

• • •

Difficulties under which the major milk and dairy companies still operate were outlined by Mr. W. A. Nell, chairman of the Express Dairy Co. Ltd., one of the largest of Metropolitan dairy concerns. At a recent shareholder's gathering "The milk industry," he told shareholders at the sixty eighth annual meeting, "continues to operate under Government control, and profit margins are still regulated by the Ministry of Food's continuous costing methods. So far as is possible, repairs and rebuilding of branches damaged by enemy action are being proceeded with, although progress is necessarily slow."

An interesting trend has been the expansion of activities by this and other dairy companies. Most firms are seeking scope for expanded activity whereby to utilize available capital and in this instance company has expanded logically into the catering field and now into the license catering field.

●

MISSION ORANGE FRANCHISES

Five new Mission Orange franchises have been granted according to recent announcements by J. Willard Pipes, Mission Dry Corporation president, of Los Angeles.

Charles H. Blume has been named Mission Orange bottler, Jacksonville, Florida, according to a recent announcement by J. Willard Pipes, Mission Dry Corporation president, Los Angeles. The franchise includes Duval, St. Johns, Flagler, Putnam, Clay, Union, Baker and Bradford counties.

K. G. Camel and William G. Abboud announce the opening of their new Mission Orange Bottling Company plant, Omaha, Nebraska. A fleet of new beverage trucks will serve dealers in Omaha, Council Bluffs and the surrounding Nebraska and Iowa territory.

G. A. Dahlberg has been granted a franchise to operate as the Mission Orange Bottling Company, Austin, Texas. The franchise includes Travis, Williamson, Bastrop, Caldwell and Blanco counties, as well as portions of Burnet, Milam and Hays counties.

W. E. Brown, Jr., son of the Mission Orange bottler in Texarkana, W. E. Brown, has been given a Mission franchise for Paris, Texas. Young Brown will be in partnership with Paul T. Cartwright in handling the franchise which includes Delta, almost all of Lamar, and the northern half of Hunt counties in Texas, with Choctaw, McCurtain and a part of Pushmataha counties in Oklahoma.

S. H. Cochran has been awarded a franchise as the Mission Orange bottler, Meridian, Mississippi.

A successful bottler in Mississippi, Cochran's new franchise includes Neshoba, Kemper, Newton, Lauderdale, Jasper and Clarke counties in that state.

Mission Dry Corporation Chicago Division Offices have been moved into larger and more adequate quarters at the same address, 510 North Dearborn Street, according to a recent announcement by Herbert E. Carman, division manager. The telephone number remains the same.

This move is in line with Mission's current modernization and expansion program, asserted Carman, while pointing out that both he and office manager, Walter Boulger, feel that the new set-up will enable them to give faster service.

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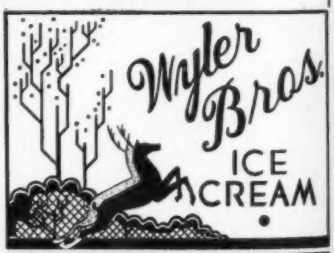

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Empire State Production

(Continued from Page 32)

produced. Some factors in the increased production—the fact that actual records showed more grain fed than ever before recorded, more calf starter was sold than ever before, more farmers provided supplemental pastures for the summer months—indicated that the 6-point program had been partially responsible for those results.

In the spring of 1947 it appeared that the need for still more fall milk would continue this year, especially in view of removal of restrictions on cream sales. Once more, industry groups, satisfied with last years efforts, offered to cooperate in carrying the program-asked the College of Agriculture to continue the program started in 1946.

The cooperation to date has been excellent—the 1947-1948 results are yet to come.

Atlanta Milk Fight Persists

(Continued from Page 26)

prices below 22 cents, the minimum to which Atlanta milk rose from a 11 cent minimum in 1939. Some co-op members charged Atlanta dairies would not buy their product even though milk was shipped in from out of state.

Secretary of Agriculture Linder issued an order forbidding the shipping of milk into the state, in an effort to provide a market for Georgia milk. Still distributors claimed Georgia did not produce enough milk to supply the state demand.

All the while, Georgia agriculturists are attempting to improve the quality of Georgia dairy herds and to make the dairy industry self sufficient.

Only one thing seems definite in the controversy. The milk control board is not going to reduce the price of milk until next Spring when they promise to consider such a move.

But, the situation is still clabbered. How must butterfat content be marked on bottles, if at all? Can certified raw milk be sold? Can the city legislate small dairies out of business? Must all milk be pasteurized?

Golden Guernsey

(Continued from Page 34)

and distribution of small volume. Only when failure exists in obtaining a distributor to market his quality product at a fair price can he afford to resort to direct distribution.

Pasteurization of milk is actively promoted by the Government and Health Departments as a health measure. Proper pasteurization requires technically skilled operators and machinery. The market for unpasteurized milk is limited to carefully selected farms and local areas.

The GOLDEN GUERNSEY tradename requirements are that herds or units be composed entirely of Guernsey cattle. Time to change over from pure-breds, not registered or some grades is allowed new producers on the following basis. If the milking herd is not 100 percent registered, the new producer is given one year to have 25% of the milking herd registered and two years to have 50%. In all cases, the supervisor for GOLDEN GUERNSEY, Inc. must check each cow for breed characteristics and check the registered animals. A GOLDEN GUERNSEY producer is expected to tattoo calves within thirty days of birth for proper identification by himself and the supervisor of milk sales.

Health requirements follow those for the market. The minimum score on the score card is 85. Proper methods and equipment as outlined on the score card cut costs and maintain quality.

The demand for GOLDEN GUERNSEY milk, maintained with a national, state and distributor campaign, is increasing.

HIGHEST QUALITY AT LOW COST

NEW *Perfection* PROTECTION

1. More EFFICIENT: Both faces of New Perfection DUBL-CHEM-FACED Milk Filter Discs are chemically toughened for greater strength. Even a full stream of warm milk won't "channel" or rupture DUBL-CHEM-FACED Discs. Easy to use. Can't be put into strainer incorrectly . . . either side can be UP. Saves time! Heavier, deeper cotton filter-center, improves filtering ...increases protection of milk QUALITY!

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NOTE: PERFECTION and ELGRADE Discs and Rolls also available, as usual, in double-faced, single-faced, or natural finish.

An important step in cooperation with U. S. Dep't. of Agriculture's 6-point Dairy Program
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Modified Phosphatase Test

Test Developed for Cheddar Can Now Be Applied to All Dairy Products—Wide Use as Health Safeguard Seen

A MODIFIED PHOSPHATASE TEST, originally developed and perfected for use on Cheddar cheese by the Bureau of Dairy Industry, U. S. Department of Agriculture, to determine whether the milk used in making the cheese had been pasteurized or not, has now been developed so that it can be applied to practically all dairy products.

The dairy products to which the test has been applied successfully include fluid milk; cream; Cheddar, Swiss, and other hard cheese; process cheese and cheese spreads; cottage and other soft, unripened cheeses; butter, buttermilk; fermented milk drinks; ice-cream mix; sherbet; chocolate milk; cheese whey; and (with less sensitivity) goat's milk.

The test promises to be useful as a public health safeguard. Among the diseases that may on rare occasions be spread through contaminated foods, undulant fever or brucellosis is now considered one of the most dangerous. At its recent annual meeting at Guelph, Ontario, the American Dairy Science Association took official cognizance of the incidence of brucellosis as a major public health problem and encouraged the dairy industry to adopt universal pasteurization of the milk and cream supply as a desirable public health measure.

Value to Cheese Industry

Since a number of disease outbreaks were traced to the eating of uncured raw-milk cheese during the war, several States have now passed regulations requiring that cheese either be made from pasteurized milk or cured for a definite period before retail sale. The development of a reliable test for pasteurization, therefore, is of great importance to the cheese industry and to the public.

With this new pasteurization test, it is now possible for cheese manufacturers, public-health officials, and Federal regulatory agencies to cooperate in setting up standards of identity which include pasteurization of milk for most kinds of cheese. The promulgation of such standards as a public-health measure is now under consideration by regulatory agencies. The test also makes it possible for similar standards to be established for milk, cream, ice cream, and all other dairy products.

The following paragraphs give further details on the test:

The improved test, known as the Sanders and Sager phosphatase test, is a modification of the older Scharer phosphatase test used for determining the adequacy of pasteurization of fluid milk. The improvement resulted from research in the Bureau's laboratories of the chemical nature and activity of the phosphatase enzyme in milk. It was worked out experimentally for Cheddar cheese in 1945-46, and has since been further perfected and applied to other dairy products.

The test depends on the fact that all normal raw milk contains a phosphatase enzyme and this enzyme is destroyed by heating at a temperature a few degrees higher than that required to destroy the most resistant of the pathogenic or disease-producing organisms that may occur in milk. It provides an accurate, quantitative measure of the phosphatase activity in milk or in products made from it, and hence is a reliable index of the adequacy of pasteurization.

Extreme Sensitivity

With the improved test it is possible to detect a decrease of as little as a single degree Fahrenheit in the pasteurizing temperature. The test is so sensitive that it will detect, for example, the presence of 1 pound of raw milk in 2,000 pounds of properly pasteurized milk, whether the test is applied to the milk or to products made from milk. The enzyme is more concentrated in cream, and the test is capable of detecting 1 pound of raw cream added to 5,000 pounds of pasteurized cream.

It is well known that pasteurization destroys the pathogenic organisms that may occur in milk, as well as a large proportion of the organisms that cause spoilage of dairy products. The usual, standard temperatures for pasteurization of milk are 143° F. for not less than 30 minutes or 160° for not less than 15 seconds, or an equivalent heat treatment. The phosphatase test gives a sensitive indication of any variation in the heat treatment below the standard. The experimenters have also determined the time of heating required to produce a negative phosphatase test over a wide temperature range, not only in milk and cream but also in ice-cream mix, process cheese, and other common dairy products.

Five State Authority Proposed

Plan for New Market Authority in Metropolitan New York Has Producer Support

PRODUCER DISSATISFACTION with milk price reductions in markets under Federal Orders has taken various forms. In the Northeast an outstanding development has been a proposal to establish a five State pact to govern the marketing of milk in metropolitan New York. The New England reaction to price reductions has been confined largely to talk concerning the establishment of a New England pool although the Vermont legislature formally protested the reductions to the Secretary of Agriculture and asked for a review of the Boston order.

The five State pact, initially sponsored by the Dairyman's League, proposes a milk marketing agreement backed by the authority of the State governments of New York, New Jersey, Pennsylvania, Massachusetts, and Vermont to control the marketing of milk in the New York counties of Nassau, Suffolk, and Westchester. These are the three counties that comprise metropolitan New York.

According to the plan, milk going into these counties would be under the control of an administrator appointed by a five State Authority. The Authority, which would replace the Federal Order for New York City, would be composed of the Commissioner of Agriculture and Markets of the State of New York, the Chairman of the Milk Control Commission of the State of Pennsylvania, the Chairman of the Milk Control Board of the State of Vermont, the Director of Milk Control of the State of New Jersey, and the Director of the Massachusetts Milk Control Board.

The Authority would be empowered to issue orders regulating the marketing of milk in the New York City area. The plan specifies that the orders are to provide for equalization of prices to producers, fixing of prices by formulas, assignment of administrative expense against handlers and compensation for services to producers, and for the issuance by the Market Administrator of rules and regulations subject to appeal to the Authority. The orders issued by the Authority would cover only those plants approved by the New York City health authorities and constituting the regular and reserve supply of milk for the marketing area.

From Federal to State Control

In general the proposal is little different from the present Federal Order for the New York market. Actually the plan is simply a shift from Federal control to State control. Presumably the Market Administrator would be the same individual as under the Federal Order, Dr. Blanford.

Milk Control bodies in the various States have seriously considered the problem. First major snag encountered in putting the plan into practice was a ruling handed down by the Attorney General of New York State that the Commissioner of Agriculture and Markets of the State of New York could not enter into such an agreement without specific authorization from the State legislature. The Vermont legislature, at a recent session, enacted an enabling measure which gave the Vermont Milk Control Board authority to enter into such a compact. A string attached to the Vermont legislation declares, "No such compact or order or any amendment to such order shall be effective, however, until the board shall find that it is approved by two-thirds of the producers of this State whose milk is delivered to plants approved as provided in the preceding sentence". This approval refers to approval by the New York City health authority.

Varied Reactions

Considerable sentiment in favor of the plan is evident among producers. Some question was felt regarding the desirability of "swapping horses" and there are those who feel that the best course is to make the Federal Orders workable rather than introduce a new authority. Other producers, whether a majority or not remains to be seen, feel that "Washington" does not understand the situation in terms of local differences and think that a five State pact would place the problem in the hands of men more closely identified with the realities of the situation.

Handler reaction has been rather vague. There has been no crystalization of dealer opinion and the tendency appears to be one of letting nature take its course. Most of the dealers exhibit considerable scepticism about the project and doubt that it will become a fact within the near future.

●

ADSA Selects '48 Site

Athens, Ga.—The American Dairy Science Association will hold its 43rd Annual convention on the campus of the University of Georgia on June 14-16, 1948, according to an announcement by R. P. Stoltz, secretary.

This meeting, the first to be held at a southern school below the University of Kentucky, will bring to the Athens Campus over 600 of North America's leading dairy experts. The announcement was made by Secretary Stoltz before a meeting of the University Dairy Science Club—an affiliate of the American Dairy Science Association—late last August Stoltz, who is head of the Ohio State University Department of Dairy Technology, consulted earlier in the day with H. B. Henderson, head, University Dairy Department, College of Agriculture officials, and University administrative officials on tentative plans for the conclave.

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DISI Backs Dairy Revival In Virgin Islands with Sound Planning

Governor Supports Program of Dairy Industries Society International — Area Selected for Various Test Measures

WITH Governor William H. Hastie, Jr., as Honorary Chairman, a Dairy Advisory Committee has been formed in the Virgin Islands as a basic move toward revitalizing dairy enterprise in that Carribbean possession of the United States.

The Committee has been formed under the stimulus of Dairy Industries Society, International which, embracing dairy farmers, processors, farm and factory suppliers and equippers, scientists, educators and associations of such individuals and interests, has a membership in 30 countries.

According to Robert Rosenbaum of Philadelphia, Chairman of the Board of Directors of the Society, reporting to his organization's headquarters in Washington on his current return from a survey of the Islands:

"Governor Hastie is solidly behind the work of the Society and hopes that, just as dairying has provided the continental farmer with his steadiest source of income, this program will assist in creating a back-to-the-farm movement in the Islands. This may well mark the abandonment of the traditional dependence upon sugar, and a single crop economy—and the beginning of diversified farming."

Mr. Rosenbaum serves the Dairy Industries Society also as a voluntary chairman of a committee on area development. Officers and directors of the non-governmental international organization are men active in dairy enterprise and dairy science in Canada, Columbia, Cuba, Great Britain and the United States. The Society's purpose is worldwide advancement of milk production and the consumption of milk and its products to lift living standards and strengthen the influences for peace. It has selected the relatively small Virgin Islands for certain test measures in the carrying forward of its all-areas purpose.

Milk in Bay Rum Bottles

According to the reports now in the hands of the Society, milk in the Virgin Islands is bottled by hand by each farmer, who delivers it to consumers in small two-wheeled carts, uncovered against the tropical sun.

"With a bacteria count averaging 225,000 at the point of production," the reports say, "all milk must be carefully boiled before use." Milking machines are unknown and the washing of milk cans and bottles would not meet strict northern requirements while bay rum or whisky bottles are often used as fluid milk containers. Milk is sold in "fifths" instead of quarts.

Mr. Rosenbaum's survey, according to the Society, reveals that sales of fluid milk in 1946 averaged only 150 gallons daily for the almost 19,000 inhabitants of St. Thomas.

Need Ten Fold Herd Jump

"This provided only one quart a month for each person. Merely the manifesting of interest by the Society in rehabilitating dairying on the Islands led to a prompt doubling of the daily production, but there are less than 300 dairy cattle on the island and to supply minimum acceptable requirements this number will have to be increased at least ten fold," according to Mr. Rosenbaum.

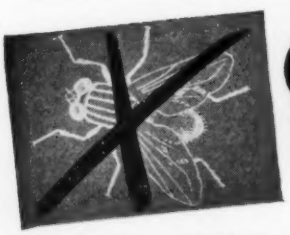
"Rapid progress, in spite of the present primitive approach and the often backward methods can be made if the dairymen there can have the assistance they need. For some years past, they have been without any technical services from the U. S. Department of Agriculture and I believe it urgent that Federal Soil Conservation agencies and Federal Extension Services be made available."

Men, Rain and Pasteurization

"(1) The movement away from the farms, which dates back for more than one hundred years, must be reversed. Local young men must be stimulated to take a renewed interest if agriculture is to survive. With the formation of the Committee of which Governor Hastie is Honorary Chairman and with the help of the Society, a community-wide project will evolve for the first time in the long history of the islands.

"(2) Recurring droughts at irregular intervals increase the feeding cost for dairy cattle and decrease their production. Holstein cows give less than five quarts a day against six times that amount in the States. The average rainfall is about 50 inches a year, but average evaporation is 72 inches. Much time and energy must be taken to conserve the inadequate water supply. Properly planned reforestation and planning of windbreaks can decrease the rate of evaporation. More efficient use of diversified forage crops will result if the Extension Services can be brought to the Islands.

"(3) A central pasteurizing plant is badly needed, but the dairymen lack the necessary funds to invest in such a facility. Ways and means for community participation are being planned and substantial interest and support have already been aroused through civic organizations and educational agencies. It is expected that a pasteurizing plant will be placed in operation, through private investment, within the next few months.



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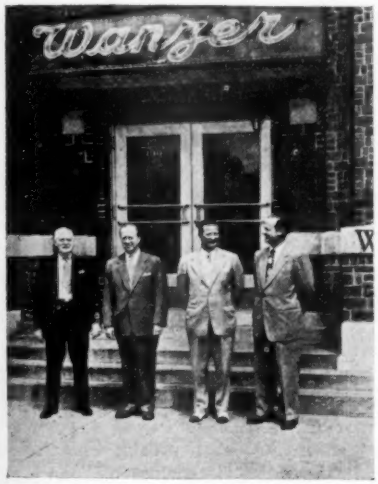
WANZER & SONS BIRTHDAY

Chicago Milk Company Celebrates 90th Anniversary of Founding

HOWARD H. WANZER, president of Sidney Wanzer & Sons, Chicago's oldest milk company, was feted by employes, business associates of the milk industry, and friends, on his seventy-ninth birthday, August 13. The celebration also highlighted his sixty-seventh year of continuous, active service in the business founded by his father ninety years ago, in 1857.

Mr. Wanzer's birthday topped a celebration of the firm's founding, when Sidney Wanzer, founder brought the first fresh country milk into Chicago by train. Visitors to the famous Sunlight Plant owned by the Wanzer Company were shown the new post-war equipment with which the plant has been re-equipped, including automatic, electronically controlled pasteurizers.

The Wanzer firm is now heading toward a century of family guidance. Vice Presidents H. Stanley Wanzer, Gordon B. Wanzer, and Sidney Wanzer III direct the multiple operations of a firm that has grown with Chicago, only twenty



Howard H. Wanzer and his three sons own and operate Chicago's oldest milk company. Mr. Wanzer celebrated his sixty-seventh year in the Dairy Industry last month.

years after the Windy City received its charter. From six strategically located branches, Sidney Wanzer & Sons now serves Chicago proper and 110 neighboring suburbs and towns.

Wanzer leadership has brought many famous "firsts" to Chicago families that receive Wanzer's home delivery service. First to introduce pasteurizing to Chicago. Wanzer was also first to hire trained fieldmen. In 1933 when the value of Vitamin D milk was plainly demonstrated, Wanzer made this product available to Chicago customers. And in 1940, Wanzer was first to introduce homogenized Vitamin D Milk in Chicago.

NUTRITION HEAD NAMED

Chicago, Ill.—Dr. George Hugh Berryman, formerly director of the Medical Nutrition Laboratory of the Office of the Surgeon General, has been made Chief of the Nutrition Branch of the Quartermaster Food and Container Institute for the Armed Forces, Colonel Charles S. Lawrence, Commanding Officer, announced today.

A native of England, Dr. Berryman is a graduate of the University of Scranton and Pennsylvania State College. Appointed to a fellowship in physiological chemistry at the Mayo Clinic, he pursued graduate work at the University of Minnesota where he received his Ph. D. in 1941. Entering the Army in 1941, he became Chief of the Division of Food and Nutrition of the Army Medical School, in Washington, with the military rank of first lieutenant. When, in 1944, the Division of Food and Nutrition was expanded to become the Medical Nutrition Laboratory, in Chicago, he was transferred to this city, becoming Director, with the rank of major, in May, 1946.

As Chief of the Institute's Nutrition Branch, he will correlate the findings of its Committee on Food Research and apply them to the development of Army rations.

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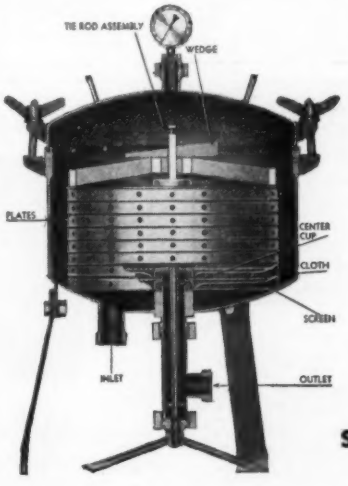

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1. Larger filtering area for continuous operation.
2. Positive "Sparkler" Wedge Seal—no by-passing.
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4. All parts removable for easy cleaning.

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Ion-Exchange Process Produces More and Better Sugar Syrups

American Cyanamid Company Device Said to Produce Liquid Sugars at Reduced Costs — Equipment Easy to Operate

IT HAS BEEN COMMERCIALLY demonstrated that with certain raw materials, such as raw sugar remelts, the ion-exchange process developed by American Cyanamid Company can produce liquid sugars at decisive savings over conventional methods, even in comparatively small-scale operations.

Until recently, liquid sugars of the highest purity were obtained by first producing crystals of white sugar and then dissolving them in water; part of the economy of the new ion-exchange process stems from the fact that it makes possible the production of liquid sugars of equivalent quality without first producing crystalline white sugar. The process also makes it possible to convert waste or off-grade sugar syrups into valuable products.

Wide Variety of Materials

Among the many materials which have been treated, either on a laboratory or commercial scale, are: raw sugar remelts; beet and cane molasses (blackstrap and intermediate grades); fermentation by-products; sorgo juices, maltose syrups; corn syrups; citrus molasses; waste and off-grade fruit juices; honey; maple syrup; and hydrolyzed starches. The new process is making more and better sugar syrups available to confectioners, beverage bottlers, bakers, brewers, ice cream manufacturers, food canners, meat processors and other users of sweeteners.

In treating raw sugar remelts, the ion-exchange process eliminates the raw-sugar washing step and its objectionable by-product, affination syrup. Operating costs for treating raw sugar remelts are well below those of present liquid-sugar plants; the quality of the resultant liquid sugars is the same. The unit processes more than 70,000 lbs. of saw sugar per 24 hours; this ion-exchange treatment, plus a simple carbon treatment, yields a water-white liquid sugar.

Another large installation has been transforming hydrolyzed corn starch syrup into water-white, crystal-clear syrup, treating approximately 25,000 gallons of 40 Brix syrup a day. The ion-exchange treatment removes all foreign taste, yielding a syrup characterized only by sweetness. The ion-exchange treatment removes most, but not all of the color; the remainder of the color is removed by carbon treatment.

The cost of ion-exchange treatment is directly proportional to the quantity of non-sugars present in the raw syrup: the lower their concentration the less its costs to remove them.

In another typical example, cane molasses is received at 75 Brix, diluted to 20 Brix, ion-exchange treated, concentrated in a triple-effect evaporator, and then finished off to 75 Brix in a single-effect evaporator. The raw molasses, a deep, muddy brown, emerges a light amber in color, suitable for direct use, without further treatment, in the manufacture of the chocolate milk for which it is intended. The raw molasses contains 3 percent ash, of which 98 percent is removed by the ion-exchange process. Similar commercial installations are currently treating waste pineapple juices and Steffens-House discard beet molasses.

It is quite generally known that potassium, calcium, magnesium, etc., impart objectionable "tastes" when present in raw sugar syrup and thus lessen its value and utility. Much valuable sucrose is discarded, or sold at a very low price, in the form of various molasses and other syrups when the non-sugar content is high enough to nullify the sucrose content.

Most of these non-sugars are salts and acids which break up into particles called ions when dissolved in water. Sugar, on the other hand, is an organic molecule, which does not ionize in solution. The ion-exchange process developed by American Cyanamid Company removes the ionized solids (non-sugars) from a solution, but has essentially no effect on the non-ionized solids (sugars).

Cations and Anions

The ionizable non-sugars break up into positively charged ions, called cations, and negatively charged ions, called anions. Synthetic resins remove the cations and give up hydrogen ions which, together with the anions remaining in the solution, constitute an acid. A second type of resin then removes the acids. Hence, by passing through a series of alternate cation and anion resin beds, the low-grade syrup is stripped of most of its ionized non-sugars.

No special skills are required to operate Cyanamid's ion-exchange equipment. Operation consists essentially of these steps, accomplished simply by turning valves:

(1) RUN, during which the raw syrup is treated until the resins become loaded to capacity with ions.

(2) SWEETENING OFF, during which the resin beds are drained free of syrup, preparatory to regeneration.

(3) BACKWASH, during which the resin bed is loosened and reclassified, and any foreign matter which may have collected on the

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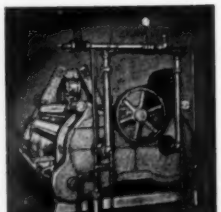
Better DRY MILK AT LOWER COST



DRY MILK MACHINES
Built in Five Sizes

The patented, glass-smooth, "20-year cylinders" give years and years of maximum production of a superior dry milk at the lowest possible cost.

Many other exclusive features insure long life with low steam and power costs.

Complete details upon request.

OVERTON MACHINE COMPANY
DOWAGIAC MICHIGAN

beds is washed away by running water upflow through the columns.

(4) REGENERATION, during which dilute acid and alkali solutions are passed over the resins to strip them of the non-sugars they have picked up and to reactivate them. The resins are used over and over again.

(5) RINSE, during which raw water is used to pick up the excess regenerants remaining in the beds.

(6) SWEETENING ON, during which the syrup to be treated is introduced. The run is then started, displacing the rinse water as the syrup proceeds through the beds.

The mechanical equipment consists essentially of columns containing the resins, with piping and valves for directing the syrup through the unit and for backwashing, regenerating and rinsing the resins. No heat or fuel is required, while only a few watts of electricity are consumed in operation of the control instruments.

The processing operations, other than ion-exchange treatment, involved in the preparation of a finished syrup vary with the user's specifications in respect to taste, color, and concentration required. Ion-exchange treatment removes essentially all of the tastes and odors described as "characteristic". The result is an odorless syrup that has no distinguishing taste other than sweetness. On some raw sugars, ion-exchange treatment alone will produce a water-white syrup; on others, the remainder of the color is removed by carbon treatment. The maximum concentration of syrup that can be fed to an ion-exchange unit depends on the non-sugars content. With comparatively high-purity syrups such as refinery liquors, sugar syrups having a Brix as high as 60° have been successfully treated on a commercial scale. If a more concentrated finished syrup is required, two additional steps are usually indicated: acid inversion to prevent crystallization and evaporation to the desired concentration.

●

SAFE DRIVING RECORD

Philadelphia—One hundred and fifty-three Supplee-Wills-Jones Milk Company drivers who have operated company vehicles from 10 to 16 years without being involvled in an accident were honored by the Company at a dinner at the Philadelphia Rifle Club recently.

These and other Supplee drivers, 80 percent of whom have records of at least one year without an accident, were responsible for the company's winning first prize for the last three consecutive years in the American Trucking Association's competition for outstanding operation and low accident rate among commercial fleets of unlimited mileage in urban areas.

A major factor contributing to the unusual record attained by Supplee is the company's driver-training program which was inaugurated seven years ago and since has been used as a model by many industrial organizations in this country, Hawaii and Puerto Rico.

●

MICH. DAIRY MANUFACTURERS

The Eighth Annual Michigan Dairy Manufacturers' Conference will be held at Michigan State College on Wednesday, Thursday, and Friday, November 5, 6, and 7. The first day will be designed specifically for butter manufacturers, the second day for ice cream manufacturers, and the third day for market milk men. A number of men, notable for their achievements in dairy manufacturing, are expected as speakers for the program. Noon day meals will be served at the college.

All meetings will be held in the auditorium of the Music Building on the campus. Registrations will be held at 9:00 o'clock and meetings proper will begin at 9:30 a.m. and 1:00 p.m.

"What's she so snooty about?"
"Haven't you heard? The boss sends her eggs to market in SELF-LOCKING CUSHION EGG CARTONS!"
one dozen eggs

SELF-LOCKING EGG CUSHION CARTONS

A FEW USERS: American Stores Company . . . Armour & Company . . . Beatrice Foods Company . . . The Borden Co. . . . Bowman Dairy Company . . . Chestnut Farms-Chevy Chase Dairy . . . Cudahy Packing Company . . . H. P. Hood & Sons . . . June Dairy Products Company, Inc. . . . The Kroger Company . . . Lambrecht Foods Company . . . Land O'Lakes Creameries . . . Riesk McJunkin Dairy Company . . . Safeway Stores, Inc. . . . Sheffield Farms Company, Inc. . . . Swift & Company . . . Western Maryland Dairy . . . Wilson & Company

SELF-LOCKING CARTON COMPANY

Division of

SHELLMAR PRODUCTS CORPORATION

599 E. Illinois Street Telephone: SUPerior 3886 Chicago 11, Illinois

★ Pacemaker in Egg Packaging ★

KASCO MILLS APPOINTS

E. D. Fogarty, for twenty years connected with the sales department of General Mills at Detroit, has joined the staff of Kasco Mills, Inc., of Toledo,

E. D. Fogarty

Ohio, where he will act as coordinator of the Company's new Beatsall Dairy Plan.

The Dairy Division is a new development at Kasco growing out of "the large increase in the Company's dairy feed business", according to E. H. Kaiser, Vice President in Charge of Sales.

●

SHORT COURSES AT MINNESOTA

Four days of short courses dealing with butter, cheese, dry milk, market milk, and ice cream are scheduled for September 22, 23, 24, 25 at the University of Minnesota.

Dormitory housing will be supplied for a limited number on the farm campus at $1.25 per night, available beginning Sunday night, September 21. Accommodations are also available at Twin City hotels but reservations should be made at an early date.

The fee for the entire four day institute is $10.00. This includes an abstract of the lectures. For those who wish to attend less than the four days the fee is $2.50 per day. Registrations should be sent to.

Short Course Office
University Farm,
St. Paul, Minn.

The program which looks extremely enticing is as follows:

September 22, 23	Buttermakers' Symposium
September 22	Market Milk
September 23	Ice Cream
September 24, 25	Dry Milk
September 24	Dairy Fieldmen
September 25	Cheesemakers

●

INSURANCE PROGRAM

Group insurance with death benefits ranging from $1,000 to $5,000 has been provided for the two hundred employees of Western Dairy Products, Inc., San Francisco, Calif. Included in the coverage are not only employees at the San Francisco headquarters, but those working in the company's branches at Los Angeles, Petaluma, Santa Cruz and Murray, Utah.

The policy, written by The Prudential Insurance Co. of America, provides for disability and sickness benefits as well as payment in case of death.

Under its terms the worker receives weekly payments if he becomes incapacitated and is forced to lose time, and if he is hospitalized there are payments to offset that expense.

According to Otto J. Jacobsen, assistant secretary of the company, cost of the insurance is being shared by both the workers and the management. The plan was enthusiastically received with an overwhelming percentage of the eligible employees enrolling.

●

PUBLIC RELATIONS DIRECTOR

Carl Snyder, former publicity director of Lyon Metal Products, Inc., Aurora, was recently appointed public relations director of the Hawthorne-Mellody Farms Dairy, Chicago, it is announced by the company.

●

WHEREABOUTS SOUGHT

The "Review" has received a request from Lowell, Michigan, to help seek information concerning the whereabouts of Newton Isaac Grimwood, who disappeared from Lowell on Jun 12. Mr. Grimwood, owner and operator of the Lowell Creamery, was struck on the head by a falling brick at the plant, and

Newton I. Grimwood

when last seen was headed for the Blodgett Hospital. He is believed to be suffering from amnesia.

Aged 28 years, height 6 feet, dark brown hair and hazel eyes, Mr. Grimwood was wearing on his disappearance a dark brown leather jacket, light tan shirt, tan trousers and black shoes and socks. He bears a small scar on his left forehead.

A reward of $300.00 is offered by his family for information leading to his return. Anyone having knowledge of Mr. Grimwood's whereabouts should notify the Kent County Sheriff's Department, County Building, Grand Rapids, Michigan; 'phone 66544, or his wife, Mrs. Ruth Grimwood, 1188 Vergennes Road, Lowell, Mich.

COFFEE the Milky Way

Café Olay

Reg. U. S. Pat. Off.

AMERICAN FOOD LABORATORIES, INC.
860 ATLANTIC AVENUE, BROOKLYN 17, N. Y.

Sales Service for Manufacturers of

MILK PRODUCTS

Evaporated Milk—Powdered Skim Milk — Powdered Buttermilk — Condensed Skim and Whole Milk — Powdered Whole Milk.

C. W. BURCKHALTER, Inc.
156 Franklin St. New York, N. Y.
WAlker 5-0727

USING OUR SEPARATOR • ITEMS OF INTEREST SKIMMED FROM HERE AND THERE

Slide Box

A COMPACT SLIDE BOX for use in the laboratory has recently been placed on the market by the Clay-Adams Company, Inc., 44 East 23rd St., New York City. The box is made of black bakelite and will hold 25 3″x 1″

slides. The inside of the box is provided with slots for convenience in holding the slides in position. Each slot is numbered with a white figure. Overall dimensions of the box are 3 13/16″x 3 1/4″x 1 5/16″.

Power Jacklift

LEWIS-SHEPARD PRODUCTS, INC., with factories at Watertown, Mass., and Crawfordsville, Indiana, announces the addition of a 6000 lb. capacity, completely electric, platform model Power Jacklift. This hand operated truck retains all of the features of the 4000 lb. model.

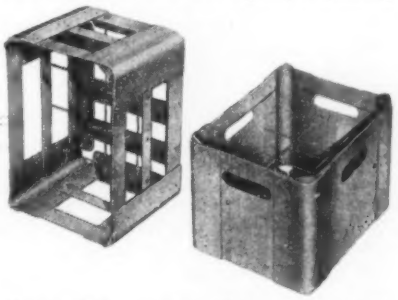
The machine is controlled entirely from the handle head and may be operated with the handle vertical or in any other position. No movement of the handle is required to start, stop, change speed, or lift and lower the load. Vertical handle operation is reported to save up to 18 inches in aisle space. Finger tip push button controls in the handle head give a tremendous saving of time where space is restricted and traffic is heavy. In close quarters the operator can maneuver easily and stop safely. Whenever the handle is released, the positive, smooth action "Deadman" type electric braking control insures safety instantaneously.

Literature covering all mechanical and operative features of this 6000 lb. platform model Power Jacklift may be obtained by writing Lewis-Shepard Products, Inc., 293 Walnut Street, Watertown 72, Mass.

Magnesium Case

DEVELOPMENT of a new magnesium milk case weighing only 5 pounds, or approximately one-third the weight of the average wood milk case, is announced by the W. F. Meyers Company, of Bedford, Indiana, one of the country's leading manufacturers of wheel and tool formers, diamond tools and special machinery.

Designed to handle the new square milk bottles which are rapidly replacing



the familiar round bottles in many leading dairies, the new magnesium case is of riveted construction and will be available in both open and enclosed types. Quantity production is anticipated within the next two or three months.

Greater ease and speed of handling and reduced load demands on delivery equipment are cited as important ad-

Stoelting

PLANT-PROVED EQUIPMENT

FOR GREATER ECONOMY and EFFICIENCY

STOELTING "Flavorite" PASTEURIZER

Simple . . . Positive . . . Dependable

Dairy plant operators prefer Stoelting plant-proved equipment because of its many outstanding points of superiority and its ability to do a better job at a lower total cost. Typical of the features found in the new Stoelting Pasteurizer is its rapid transfer of heat. Milk is brought to pasteurizing temperature by steam heating – that means even heating without flavor destroying scorching or cold spots. Special inclined propeller type agitator, driven by an entirely enclosed self lubricated motor, provides gentle yet positive action, regardless of the amount of milk in machine. Inner jacket is of stainless steel. Outer jacket on standard model is finished with white enamel. Deluxe model has No. 4 polished stainless steel outer shell. Write for additional information.

FOR PASTEURIZING and COOLING

STOELTING BROS. CO., KIEL, WISCONSIN

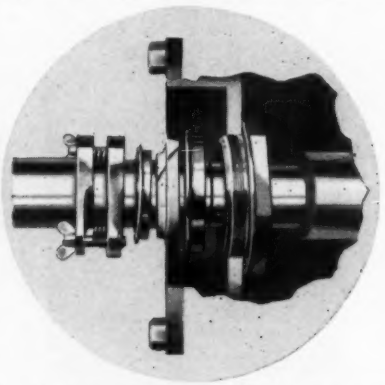
vantages of the magnesium case, which is approximately 8 pounds lighter than the conventional wood case (dry weight), or anywhere from 11 to 14 pounds lighter than the same wood case after it has absorbed the normal amount of water through washing, steaming and storage. Several other advantages will also be apparent. The magnesium container is not only lighter, but also far stronger. It will not splinter, break or otherwise deteriorate, and it thus has a far greater life expectancy than the wood case. It also has the advantage of being easier to clean and more sanitary. It may be treated with the same cleaning solution used on wood cases. These solutions are said to have a corrosive action on cases made from certain other light metals.

Although it is anticipated that maintenance cost will be kept to a minimum because of sturdier all-metal construction, another outstanding feature is the fact that interchangeable parts are used throughout. The simple riveted construction will keep repair costs down.

Coil Pasteurizer

AFTER actual plant operation in several leading creameries, The Creamery Package Mfg. Company, Chicago, has announced the Wizard Coil Pasteurizer with Sanitary Seal.

As another step towards the industry's goal of maximum sanitation, the CP Sanitary Seal assembly eliminates the customary stuffing box and can be easily and readily cleaned. All that is necessary is to remove the spring retainer, slip off the split compression ring, push



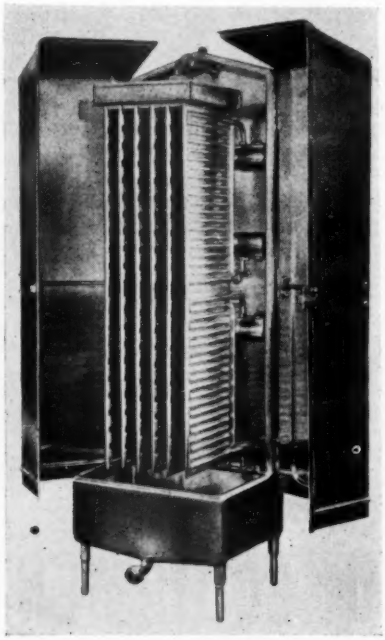
back the pressure ring and seal ring, and complete access may be had for hosing and brushing the 4″ to 4¾″ exposed portion of the shaft surface. The split compression ring is made of flexible plastic material that is odorless and fat resistant.

The CP Wizard Coil Pasteurizer has been one of the industry's most useful machines for over forty years, being used for heating, pasteurizing, cooling, storing and processing a variety of products including cream, ice cream mix, chocolate milk, butter-milk, and other specials.

Further information on the CP Wizard Coil Pasteurizer with Sanitary Seal may be obtained from The Creamery Package Mfg. Company, 1243 W. Washington Blvd., Chicago, Ill.

New Mojonnier Cooler

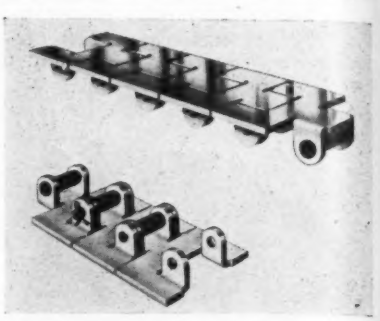
A NEW COOLER recently introduced by Mojonnier Bros. Co. of Chicago and said to be the "answer to the need for small capacity dairy operations" has been placed on the



market. Incorporating all of the basic construction features of the Mojonnier Senior Compact Cooler, the new stainless steel Junior Cooler model is now available to handle capacities of from 300 to 5000 pounds of product per hour. It is adapted for cooling milk, cream, ice cream mix, regenerated milk, and similar products. Cooling plates, or sections, are mounted in a compact housing and swivel open for easy cleaning. Flexibility is an important feature too, since the capacity of the cooler can be increased later by adding additional sections. One of the outstanding advantages is the fact that ammonia is used directly on the cooler to cool the product, thus eliminating the need for intermediate heat transfer systems. The Mojonnier Junior Cooler shown here has space in the housing for 8 cooling sections. A smaller model, using 4 cooling sections is also available.

Conveyor Chains

THE WADE-MORRISON COMPANY, a newly formed corporation with executive and sales offices at Cleveland, Ohio, and factories at Columbus and Alliance, Ohio, has begun



manufacture of conveyor chains. Deliveries are being made in some cases as quickly as six weeks and in most cases not over ten to twelve weeks.

At the outset activities are being confined to special chain made to the users' requirements, a flat top conveyor chain for bottles, cans, etc., and standard extended pitch roller chain made from Manufacturers Standard (A.S.A.) rollers, bushings and pins in the 1½″, 2″, 2½″ and 3″ pitches. In the heavier, long pitch engineering sizes practically all pitches and weights are offered up to a maximum of 18″ pitch.

Any standard or special attachment can be furnished for any chain offered. Certain sizes of chain can also be furnished of stainless steel construction for corrosion resistance.

Cherry-Burrell Booklet

A BOOKLET published by Cherry-Burrell Corporation entitled "The Nutritive Value of the Non-Fat Milk Solids" has been attracting wide attention. Requests for the booklet have been received from 853 different sources. A total of 5,500 copies have been distributed. In addition the American Dry Milk Institute requested and received 2000 copies for distribution among their membership.

The booklet is a collection of articles published in the Cherry-Burrell magazine *"Circle"*. Each article was prepared by a recognized authority on the subject. A limited number of copies remain and are available upon request.

New Space Heater

A PACKAGE DESIGNED to increase working comfort on farms is being manufactured and marketed by the Crown Heater Division of the Marathon Foundry and Machine Company, Wausau, Wisconsin.

The package consists of the Crown Electric Space Heater with THERMO-

STAT CONTROL, complete with all necessary brackets, wires, switches, and equipment, ready to install. This novel, practical space heater is constructed of heavy-weight, rust-proof aluminum and is specially designed to prevent water and other foreign matter from coming into contact with the heating elements. The unit measures 53″ high, 14¼″ wide and 5″ deep. It operates on standard 220 volt alternating current. Compact Crown Electric Space Heaters are easily installed and have no moving parts that require oiling or general maintenance. For most economical operation, the heater is recommended for use in rooms where temperature control between 40 and 50 degrees is desirable.

An illustrated folder on the Crown Electric Space Heater will be mailed immediately upon request by the Crown Heater Division, Dept. N — 35, Marathon Foundry & Machine Co., Wausau, Wisconsin.

Utility Truck

A TWO WHEELED rubber tired hand utility truck that has considerable merit as a means of handling milk cans on the farm and in the milk plant has been placed on the market by the Holm's Manufacturing Company, 106 North Main St., Akron, Ohio. The truck is made of an all steel welded construction, painted white as a sanitary measure. It has a capacity of 750 pounds. Shipping weight is 30 pounds.

Automatic Steam Boiler

THE "ALERT" Steam Boiler manufactured by Alert Engineering Products, Detroit, Mich., is a completely automatic installation and is delivered to the user with all controls in place on the Boiler ready for operation. This unit includes the condensate return System with motor, pump and tank with float valve in tank to add make up water as needed.

Also water feed control to maintain water level in boiler-pressure control including complete safety features. When delivered it is ready for service with all interconnected piping and wiring neatly finished by experts at the factory.

The entire unit with Boiler and all controls, pump, piping and wiring is mounted on one substantial steel base bedplate and is very small and compact in floor space. When set in place it is only necessary to remove the boxing, make water, steam and fuel connections, then plug in the extension to wall socket for current and it is ready to operate.

The Boiler is shipped with all parts in place.

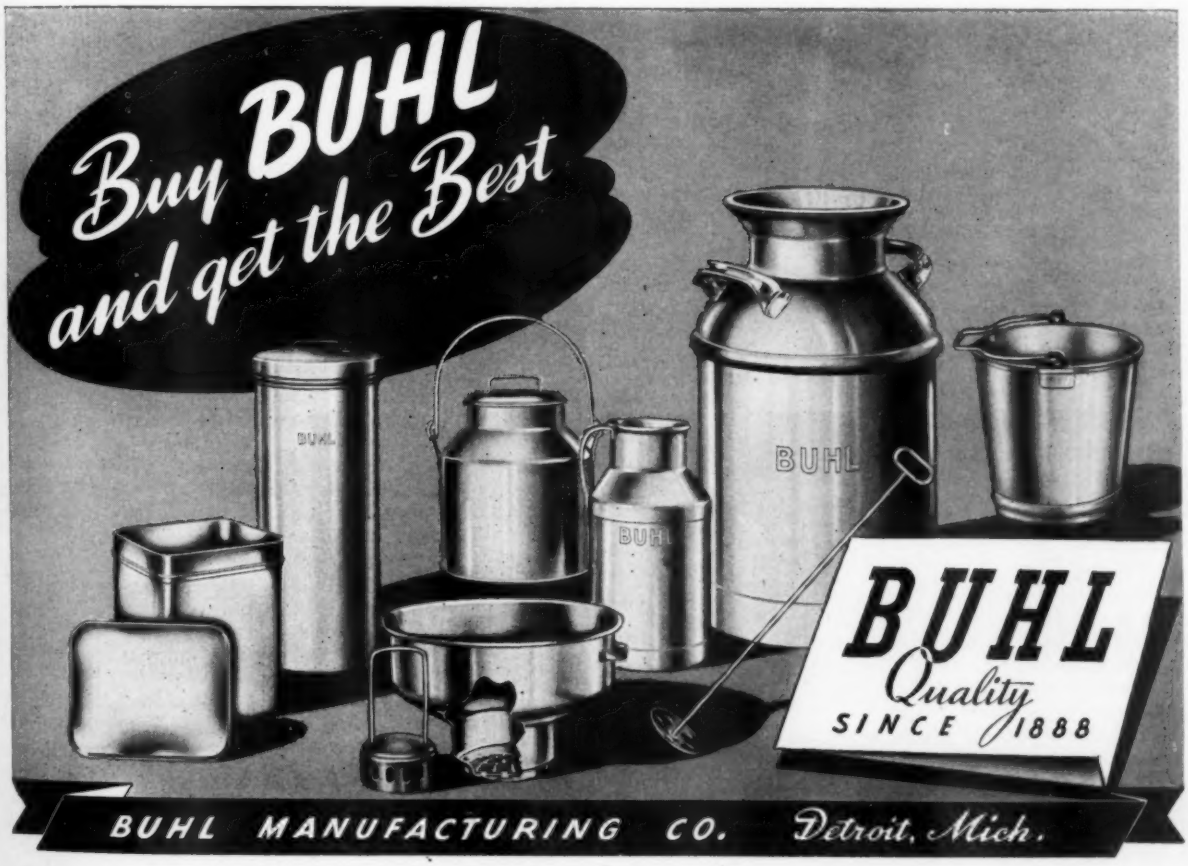
Induction Heating Corp.

INDUCTION HEATING Corp. manufacturers of THER-MONIC Induction and Dielectric Heating equipment, announces that it has moved to its recently completed quarters at 181 Wythe Avenue, Brooklyn 11, New York.

It will occupy the entire second floor in this modern brick and concrete build-

ing, an area more than twice the size of its former plant. Larger facilities have been provided to take care of increased production activity and to accommodate expansion in the Engineering, Drafting and Jig and Fixture Departments.

Particular attention has been given to the enlarged and more fully-equipped laboratories. They will be maintained



for more efficient treatment of Customers' production problems and for research work on wider applications of electronic heating throughout industry as well as development of improved THER-MONIC equipment.

●

Answers to

ARE YOU A DAIRYMAN

1. Heat breaks the large fat globules down into small units. These units tend to distribute themselves more evenly throughout the milk.
2. Not always. The average mortality is around 25 percent although it has run as high as 50 percent.
3. Golden Guernsey, Inc. a subsidiary of the American Guernsey Cattle Club.
4. Every other day delivery.
5. Concrete floors exposed to lactic acid disintegrate rapidly.
6. October 26–November 1, 1947 at Miami Beach, Florida. See you there.
7. Neoprene.
8. Any inflammation of the udder.
9. A slight decrease was noted this year although increased production per cow raised the total milk production for the nation.
10. Estimated at nearly fifty million quarts.

●

REFRIGERATION ASS'N SHOW

Pittsburgh–Plans for the 5th All Industry Refrigeration and Air Conditioning Exposition in Cleveland, January 26-29, are well underway according to a recent announcement by the Refrigeration Equipment Manufacturer's Association.

A total of 152 companies and associations have already taken 203 spaces the announcemet declares. Assignment of 14 more spaces will assure a show equal in size to the successful 1946 show described as "the greatest in the industry's history".

Full cooperation with the 1948 show has been extended by the National Association of Refrigeration Contractors, which has laid plans for special activities for refrigeration contracts during the exposition period.

Headquarters of NARC will be set up in the Hotel Allerton at Cleveland, and the association is extending a cordial invitation to refrigeration contractors across the country to attend the exposition and the NARC meetings.

Boost 1947-48 Program

National Dairy Council Finance Committee Adopts Enlarged Publicity and Sales Drive for Coming Year

Chicago, Ill.–Meeting in special session in Chicago, industry leaders who comprise the National Dairy Council's Finance Committee have adopted a hard-hitting program for sales effectiveness to stem the rising flood of competition by other food groups. As announced at the conclusion of their deliberations at the Council's headquarters, 111 North Canal Street here, the sales program has these twin objectives:

1. To hold the dairy industry's hard-won gains in the terrific competition of all food groups for the consumer's dollars.
2. To make more sales that stay sold –by establishing more habit buying of dairy products before other food groups create buying tastes at the expense of dairy products.

"Action now is the keynote," according to Chairman Wilbur Carlson of the Finance Committee, himself a top executive of Kraft Foods Corp.

"The only sound way for the dairy industry to hold its gains in this fierce scramble for the food dollar," declared Chairman Carlson, "is for every segment of the dairy industry to unite and back the most effective sales force at our command – the broad, accepted, educational, nutritionally sound and professionally endorsed program of the National Dairy Council. This program for years has been increasing public habit buying of dairy products through millions of school teachers, nurses, doctors, nutritionists, and home economists. The Dairy Council program has been so effective that now other food groups are adopting phases of its program, and are spending millions in non-commercial education and promotion of their products."

Leaders Issue Comments

Regarding fluid milk sales, Charles R. Haller, General Sales Manager of Beatrice Foods Company, Chicago, has this to say:

"For the first time in five years, fluid milk sales are leveling off. The sale and promotion of fluid milk requires some special effort and attention, now, if we are to hold our present position in public demand.

'The National Dairy Council can be very helpful, nationally, in focusing attention on this most vital industry."

On that same object, W. J. Swayer, President of the Pure Milk Association, Chicago, declares:

"Our members approve of and are supporting the National Dairy Council. We believe that through the Dairy Council much can be accomplished to hold the present market for milk and milk products and build even greater future markets. In making this investment we help to provide an effective and efficient promotion which will continue to prove beneficial to the entire dairy industry."

George Gallagher, President of the Krim-Ko Company, Chicago, speaks for the machinery and supply segment of the dairy industry. Says Mr. Gallagher:

"I have said it before; I repeat it again; it is my firm conviction that no agency, regardless of what industry it represents, actually sells more of its industry's products per dollar or revenue than the National Dairy Council. The dairy machinery and supply industry is matching dollar for dollar, with both producers and processors and handlers, to expand the essential promotion of this dependable organization."

Howe Speaks for Butter Group

Speaking for the butter industry, D. K. Howe, Executive Vice President of Fairmont Creamery Company, Omaha, declares:

"Any man in the butter business knows that our industry is in a critical position. The market for our product has been gradually undermined by several forces. We can and must combat unfavorable propaganda and influences. The National Dairy Council has the answer. You and I must put up the money."

"A quota basis will be set up for each state to share in this national campaign," Chairman Carlson said, "and there will be regional aids – all from industry because industry leaders know that we must act now, before other foods take business away from us.

"This membership drive for the Dairy Council is a real sales opportunity for all of us in the dairy industry," declared Chairman Carlson. "Every dollar that industry provides the Dairy Council is multiplied into many dollars worth of sales. And sales, built on habit buying, are long lasting and most economical."

●

ICE CREAM FIRM MOVES

Costa's Ice Cream Company, well known New Jersey firm has announced the removal of their offices and manufacturing facilities to The Cloverleaf, located on Route 25, Woodbridge, N. J.

The new facilities described as "America's Most Modern Ice Cream Plant" may be reached by telephone at Woodbridge 8-2300 or by mail Box K, Woodbridge, N. J.

OF EVENTS TO COME

Dairy Conference—Cornell University, Ithaca, N. Y., Sept. 4-5 Write Prof. A. C. Dahlberg.

New York State Association of Milk Sanitarians—Annual meeting, Hotel Hamilton, Utica, Sept. 18, 19, and 20.

Packaging Machinery Manufacturers Institute—Fifteenth annual meeting on October 6 and 7, 1947, at the Hotel Sheraton, Springfield, Massachusetts, George A. Mohlman, President, Package Machinery Company, East Longmeadow, Massachusetts, is Chairman of the Committee on Arrangements.

American Public Health Association—75th annual meeting, Atlantic City, October 6 to 10 inclusive.

Minnesota Creamery Operators' & Managers' Association—Annual convention, Hotel Lowry, St. Paul, October 7-8.

Wisconsin Creameries Association — Annual Convention, October 15, Northern Hotel, Chippewa Falls, Wis.

International Association of Milk Sanitarians—Annual meeting Schroeder Hotel, Milwaukee, October 16, 17, and 18. Dr. J. H. Shrader, 23 East Elm Ave., Wollaston 70, Mass., secretary-treasurer.

Wisconsin Milk Sanitarians Association—Annual meeting with International convention at the Schroeder Hotel, Milwaukee, Wis., October 16 to 18, inclusive. K. G. Weekel, president, Department of Dairying, University of Wisconsin, Madison.

Missouri Butter and Cheese Institute—Annual Convention will be held October 17-18, 1947, at the Missouri Hotel in Jefferson City, Missouri.

Red River Valley Dairymen's Association—Annual butter contest and convention, Thief River Falls, Minn., October 21, 22.

Wisconsin Creamery Employees Association—Tentative arrangements have been made for the annual convention at Marshfield, Wis., October 21, and 22, and 23. James Ashley, Chippewa Falls, secretary.

Dairy Plant Operators and Milk Distributors Conference—26th Annual Meeting, Dept. of Animal and Dairy Husbandry, University of Vermont, Burlington, Vt., October 29-30.

Vermont Conference for Dairy Plant Operators and Milk Distributors—Twenty-sixth Annual Conference, October 29 and 30, University of Vermont, Burlington, Vt. O. M. Camburn, Director of Short Courses and Educational Conferences.

Dairy Industries Society, International—First annual meeting will be held in Miami, Fla., October 27 to November 1. For further information, address the society at 1426 G St., N. W., Washington 5, D. C., U. S. A.

International Association of Ice Cream Manufacturers—Annual convention, Miami Beach, Fla., October 27, 28, and 29.

Milk Industry Foundation—Annual convention, Miami Beach, Fla., October 30, 31, and November 1.

Dairy Industries Supply Association—"Standby" headquarters during Milk and Ice Cream convention week, Miami Beach, Fla., October 27 through November 1.

Ohio Animal Nutrition Conference—Ohio State University, Columbus, Ohio, November 6 and 7.

National Cooperative Milk Producers' Federation—Annual convention, Hotel Jefferson, November 5-8.

Iowa Milk & Ice Cream Association—Annual convention, Des Moines, Iowa, November 12-14.

New York State Milk Distributors—Annual convention, Arlington Hotel, Binghamton, November 12-13.

Indiana Dairy Products Association—Annual convention, French Lick Springs Hotel, French Lick, Indiana, November 17-19.

Ontario Milk Distributor's Association—Annual Convention November 29 and 30, General Brock Hotel, Niagara Falls, Ontario, Canada.

American Butter Institute—Annual convention will be held November 19 and 20, 1947, at the Congress Hotel, Chicago, Ill. Russell Fifer, executive secretary, 110 N. Franklin St., Chicago 6, Ill.

Washington State Milk Dealers Association, Washington State Ice Cream Manufacturers Association and Washington State Creamery Operators—Annual Conclave at Vancouver, B. C., November 19-21, 1947, inclusive.

CONTAINER REPRESENTATIVES

Container Corporation of America announces the appointment of J. D. Brown and J. H. Mulligan to its midwest staff of field representatives specializing on sales to the ice cream, bakery, locker plant and paper jobber trade. Each will handle the company's entire line of paraffined cartons for ice cream, butter, lard, oleo and shortening, stock frozen food cartons for lockers and home freezers, and packages for bakery products.

Mr. Brown will cover a territory comprising the state of Illinois, southern Wisconsin and western Indiana. Mr. Mulligan will cover an adjoining area which includes eastern Indiana, western Ohio, southern Michigan and Kentucky.

Formerly purchasing agent for Fitzpatrick Brothers in Chicago, Mr. Brown served as mechanical liaison engineer in the aircraft division of the Goodyear Tire & Rubber Company during the war. He joined Container Corporation's staff in October 1945 to assume charge of sales service in the paraffined carton and pail division.

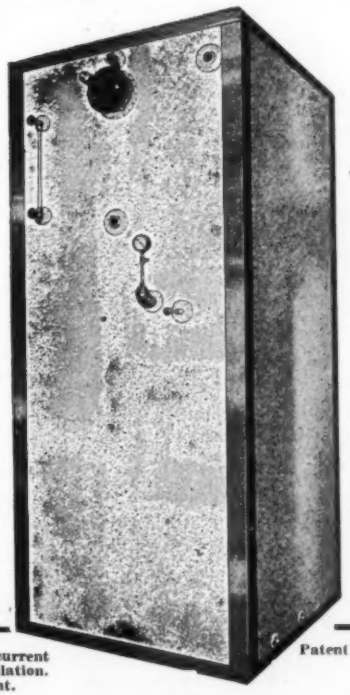
For ten years prior to his association with Container Corporation of America, Mr. Mulligan was engaged in sales work for the Dennison Manufacturing Company, calling on manufacturers, retailers and jobbers in Missouri and Illinois.

TONS OF ICE AT YOUR DISPOSAL without ice handling

- LARGE CAPACITY
- EFFICIENT
- ECONOMICAL
- ATTRACTIVE

KING ZEERO
ICE BUILDER

Here you have the ideal installation for any plant regardless of production capacity. The King Zeero Ice Builder supplies all the refrigeration you need . . . THE COOLING POWER OF TONS OF ICE . . . when and where you need it, 24 hours a day, day in, day out. A comparatively small compressor works for you all through its running time, storing ice for future use or helping maintain 32°-34° circulating water. The cooling capacity is multiplied many times because cooling loads are handled by a combination of melting ice and FLASH EFFECT. Temperatures lower than 32° may be attained by adding a small amount of calcium chloride or other freezing point depressants.



Patent Pending.

The King Zeero Ice Builder is a compact unit requiring very little floor space. Low initial cost, small current demand charge and a minimum of maintenance requirements make it an exceedingly economical installation. Its polished aluminum exterior and trim lines will add attractiveness to even the most modern plant.

THE KING ZEERO COMPANY 1447-55 MONTROSE AVE. CHICAGO 13, ILLINOIS

WANTS and FOR SALES

RATES: "Position Wanted," 50c. Limit of 50 words; 2c for each additional word. All other advertisements, 5c a word ($1.00 minimum). Keyed ads, 15c extra to cover return postage. The name and address should be included in counting the words. All payments strictly in advance.

FOR SALE

FOR SALE—20 Stainless Steel Milk Tanks, on trailers, cheap. 1100 gallon to 3400 gallon, also storage tanks. Myer Simon, 150 West 87th St., New York City. 8-M-2

FOR SALE—Dairy in town of 15,000. Only pasteurizing plant in town. Equipment for 150 gallons. Business can be increased. Green's Dairy, Blytheville, Ark. 2-M-3

FOR SALE—48x30 stainless steel vacuum pan. 400 gallon oval coil pasteurizer, stainless steel lining; 300 gallon forewarmer, stainless steel lining; 500 gallon stainless steel cheese vat. Above have been replaced with larger equipment, have had very little use, and are as good as new, 3x3 York ammonia compressor; 5x5 Phoenix ammonia compressor; McKinley, 4 cans per minute, rotary can washer; two stainless steel 2 compartment weigh cans; one Specialty Brass forewarmer, 7000 lbs. capacity. Saginaw Creamery Co., Saginaw 5, Mich. 8-M-4

FOR SALE—Two Erie City 150 H.P. boilers with stokers; one 20 H.P. Dutton boiler; one 6 ft. copper condensing pan with Bryer condenser; new air and water cooled Freon compressors from ¾ to 5 H.P., all complete; Fairbanks-Morse deep well pump, Model 6920, complete with motor; one direct expansion surface cooler; 18-2 in. tubes, 12 6 ft. long with covers; Jensen fan type cooler, tinned copper, 8 sections, aluminum covers, 14,000 lbs. per hour pasteurized, 20,000 lbs. raw milk; one Jensen cabinet cooler, 11 water and brine sections; one Kron 1000 lb. receiving room scale with stainless steel weigh can and receiving vat; 500 half-pint milk cases, 20 to the case, wire partitions and covers on top; 5,000 quart cases in perfect condition; stainless steel truck tanks—2275, 3200, 3300 gallon oval; one 2875 Heil oval frameless tank complete with trailer; one 2000 gallon horizontal stainless steel milk storage tank; Meyer Dumore 8 wide Sr. bottle washer just rebuilt, will wash square and round milk bottles; 250 gallon homogenizer, bronze head with motor; 100 gallon viscolizer complete, stainless steel head; 200, 800 gallon New York City approved viscolizers and homogenizers, stainless steel; Braun straight-away can washer, 3 to 4 per minute; one rotary can washer, 2 to 3 per minute; Mojonnier over-run tester; one 5x5 Jurick, one 6x6 York compressor, complete with motor, condensers, receiver, gauges, traps, etc.; one 5x5 York compressor only; 2 sections internal tube coolers; 100 gallon stainless steel pasteurizer, no agitator; one sanitary pipe wash sink; 2 No. 90 Mojonnier bottle fillers and cappers; one Emery Thompson 40 quart Batch freezer; one Petro oil burner complete with controls and motor; one International 10 can cooler; one No. 4 magnetic DeLaval milker. Double and single Cheese Presses, new and used. Two new 10,000 lbs. Stainless Steel Cheese Vats. Sam Edelmann, 321 Broadway, New York 7, N. Y. WOrth 2-4975. 8-M

BUSINESS FOR SALE—250 cans a day, plant rolling stock and wholesale and retail routes. Northern New Jersey. Box 170, care this publication. 9-M

FOR SALE—New high pressure boilers; also used or reconditioned boilers; smoke stacks; breechings; new or used boiler tubes; pumps; motors; pipe, valves and fittings. Otto Biefeld Co., Watertown, Wis. 9-M

FOR SALE

EQUIPMENT FOR SALE—500 gallon Creamery Package S/S. Holding Tank with direct expansion agitator; 850, 2000 and 3000 gallon Glass Lined Milk Storage Tanks; large stock of Pasteurizers, Bottle Washers, Bottle Fillers, Coolers, Can Washers, Homogenizers or Viscolizers, Pumps, Surge Tanks, Storage Tanks, Heaters, Separators, Weigh Cans, Filters, Vacuum Pans, Ice Cream Freezers, etc. Write or wire your requirements. Lester Kehoe Machinery Corporation, 1 East 42nd St., New York 17, New York. 9-M

BUSINESS FOR SALE—600 cans per day, country and bottling plant, excellent opportunity for expansion. Central New Jersey. Box 172, care this publication. 9-M

EQUIPMENT FOR SALE—New 1,000 lb. per hour separator; 100 gal. Cherry-Burrell Sp. F. Pasteurizer; 4 ft. 2 sec. cooler; 2 H.P. water cooled Paar compressor; Ice box blower unit. Ed. McCulloch, 1505 28 Mile Rd., Washington, Mich. Phone 3893. 9-M

FOR SALE —Approximately 80 gross handy quart milk bottles, standard cap seat, new in crates, and also 500 standard quart cases. Rodewald Farms Dairy, Box 382, Roselle, Ill. 9-M

FOR SALE — Dairy Plant — Milk and cream business in Connecticut — one-half wholesale and one-half retail. Volume $15,000 monthly. Complete new stainless steel equipment, including homogenizer and seven good trucks. Long lease on plant. Price $40,000—terms to be arranged. Box 164, care this publication. 9-M

FOR SALE—Approximately 2,000 gross 48 mm. milk bottles, together with approximately 20,000 quart milk cases in good condition. Very reasonable. Eastern Farms Products, Inc., 390 Oakland St., Brooklyn 22, N. Y. 9-M

FOR SALE—Milk Plant in Florida on railroad siding. Fully equipped bottling and distribution—now doing wholesale business to hotels and restaurants. Have farmers delivering milk to plant. Normal population 350,000—in season over one million—Excellent opportunity to expand. Last years' business over $300,000. Cash needed $35,000. Owner not well—may consider partnership with experienced operator. Box 165, care this publication. 9-M

EQUIPMENT FOR SALE — Since discontinuing my milk business recently, I would like to dispose of the following equipment and am asking $1000.00 for the lot. This includes the following: 100 Gallon Pasteurizer complete with long neck and recording thermo. Cherry-Burrell spray type, Model S.E. 100M, Serial No. 2423; 6 ft. Aerator—some sanitary pipe; Brian pump with motor; Separator—DeLaval, New World Standard Series No. 14; Electric Bottler—4 hole; Sanitary Way—2 hole hand bottler (Cherry-Burrell); 4 H.P. Boiler; Electric Brush type wash tank with sterilizer; 30 used wagon boxes, quarts, pints, one-half pints; Butter box; 10 Gross black lettered common sense bottles, quarts, pints and half pints; 25 ft. steam hose. This would be ideal equipment for someone who is just starting out with a small milk business. T. Forrest Marshall, 1447 Summit St., Linwood, Pa. 9-M

FOR SALE

USED MILK BOTTLE CRATES—Can deface old name and rebrand. Write or phone for present day inventory. Ohio Creamery Supply Co., 701 Woodland Ave., Cleveland, Ohio. 8-M-t.f.

NEW JERSEY, Newark and Pennsylvania approved milk in tanks or cans, on daily or contract basis. Major Smith, 3229 Bergenline Ave., Union City, N. J. 8-M-4

FOR SALE—Michigan ice cream and milk plant. Yearly ice cream sales over 200,000 gallons. Milk receipts 22 million pounds. Manufacturing powdered and condensed milk. Latest stainless steel equipment throughout. New over-capacity automatic power plant. Box 157, care this publication. 8-M-3

FOR SALE—One lot of round 56 mm. milk bottles, quarts, pints, and half-pints. Also one lot of wooden cases of all sizes in very good condition. Discount on large purchases. Long Meadow Dairies, Durham, N. C. 9-M

FOR SALE — Retail milk business in large Central New York City. Yearly income about $60,000. New plant. House nearby also in the deal. Total price $45,000. Terms available. Box 167, care this publication. 9-M

FOR SALE—Modern Milk Pasteurizing and Distribution Plant located in Bay St. Louis, Mississippi, in good milk production area. Capacity 2,000 gallons per day. Property consists of machinery and equipment, square bottles and cases, office equipment. Total sales price $26,000.00. Advantageous lease on building and site good for 20 years. New Orleans Bank for Cooperatives, P. O. Box 72, New Orleans, La. 9-M

EQUIPMENT FOR SALE — Braun straight-away can washer with cover replacer, 14 cans per minute; Glass lined pasteurizer with side agitator 300 gallon capacity; Four Pfaudler Lo-Vats glass lined with agitators—200 gallons each; Two 500 gallon polished stainless steel single shell tanks; Pre-fabricated walk-in refrigerator warehouse, 12 foot 10 inches wide, 43 feet 6 inches long by 6 feet 6 inches high in three compartments insulated with spun glass and doors for each compartment. Brand new, never used; Freon unit, gasoline engine driven, automatic control, together with blower and 10 H.P. gasoline engine capacity 12,000 B.T.U. per hour. Brand new and complete; Patterson-Kelly hot water heater with controls, 250 gallons per minute; One Clayton high pressure boiler 100 H.P. 125 lbs. pressure, complete with automatic water feed, oil burner and controls. This is a compact unit requiring 4 ft. wide, 7 ft. long and 7 ft. high; One CP shell and tube brine cooler float and surge drum with valves complete, 10 ton capacity, 24 tubes, 2 in. dia., 8 ft. long. cooler is 18 in. in dia., has 7 passes; One Shell and tube brine cooler—15 ft. 6 in. long, containing 30 tubes 2 in. diameter 15 ft. long, 4 passes; Three 3000 gallon Pfaudler horizontal glass lined storage tanks. The above equipment located in New York State. Box 168, care this publication. 9-M

EQUIPMENT FOR SALE—One Cherry-Burrell Can Washer complete with pump and motor drier 3 to 4 per minute, hand operated, A-1 condition; One Cherry-Burrell Brine Cooler 36 tube 3½ x 6 ft., complete with stand used one season; One Creamery Package Pre-heater 8 tube 1½ in., 42 in. long, A-1 condition. Arlington Dairy Co., 1441 No. Wood St., Chicago 22, Ill. 9-M

FOR SALE—Grade A milk distributing plant in Southern Oregon. Complete with trucks, all necessary equipment—grossing $100,000 per year. Two-dwelling home adjoining. $35,000. One-half down. Box 169, care this publication. 9-M

FOR SALE

FOR SALE—Fully equipped pasteurizing plant and dairy bar in connection. Large capacity ice cream and butter machinery. Plant of brick construction located on main street of city with over 60,000 population which is surrounded by good milk producing territory. This is a well established going business for over 14 years. A real opportunity. C. L. Ulrich, Realtor, 318 Michigan National Bank Bldg., Dial 6514, Battle Creek, Mich. 9-M

BUSINESS FOR SALE—80 cans a day, own plant, own routes, excellent source of supply. In good area in New Jersey. Box 171, care this publication. 9-M

FOR SALE—1500 used milk cases. Lot of them New. For Round quarts. $1.00 each. Lincoln Dairy Co., 69 Ward Place, Hartford, Conn. 9-M

EQUIPMENT FOR SALE — 1 Heil 6 wide milk bottle washer complete with spare parts—price $1,000.00; 1 4500 lb. per hour Westphalia Cream Separator—price $500.00; 1 Davis No. 5 milk bottle filler—stainless steel bowl—equal full valves—price $400.00. This machinery is ready for immediate shipment. Harmony Dairy, 800 Fulton St., Pittsburgh 12, Pa. 9-M

FOR SALE—Well established wholesale egg business which will easily gross $200,000.00 this year. This could easily be doubled for one who is familiar with handling butter and poultry. New equipment, including 3 trucks. Will sell with or without building. For full particulars, write Hulett's Egg Market, 521 E. Saginaw St., Lansing, Mich. 9-M

FOR SALE—1 Used Bailey Steam Meter; 1 Used Tin Copper Surface Milk Cooler, 8 feet long; 1 Simplex Churn 100-pound capacity, unused. Sauquoit Valley Dairy Co., Inc., 491 French Road, Utica 4, N. Y. 9-M

WANTED

DAIRY PLANT OWNERS SEEKING
Progressive Steam Fitting Concern
Plants Modernized
Steam and Condensation Surveys
for Fuel Conservation
Boilers and Machinery Installed
Heating and Insulation
Eastern Territory Covered
S. PINN & Son
1271 Hoe Ave. New York 59, N. Y.
8-M-t.f.

WE ARE INTERESTED in purchasing a quantity of Quart, Pint and Half-Pint Cases. Send full particulars stating quantity, condition and price. Box 150, care this publication. 8-M-t.f.

HELP WANTED

CONDENSING MAN WANTED — Experienced manufacturer of condensed milk, milk products, and ice cream mix. Good opportunity and salary. State age, experience, references, and salary desired. Meyer Zausner, 175 Franklin St., New York 13, N. Y. 9-M

BROKERS WANTED—Established manufacturer of cocoa and chocolate products listed AAA-1 in Dun's has opening for brokers in several territories calling on the Ice Cream, Dairy and Soda Fountain trade. Items include Dairy Drink Powder and Syrup, Ice Cream Bar Coating, Bulk Cocoas, Chocolate Syrup, etc. Brokerage 5 per cent. In answering give full details as to experience, territory, covered, number of salesmen and names of manufacturers you now represent. Our brokers know of this advertisement. Box 166, care this publication. 9-M

LABORATORY SERVICE

CHEMICAL and Bacteriological Analyses of milk and its Products. Personal attention to Official Samples and Sanitary Requirements. N. Y. State Licenses. DAIRY PRODUCTS LABORATORY, 82-31 60th Rd., Elmhurst, L. I., N. Y. 8-M-3

WANTED—100 cans milk a day for the Oranges and Montclair on contract basis for year from either October or January. Box 173, care this publication. 9-M

●

MARATHON CORPORATION

Six regional sales offices, in six principal market centers of the United States, have been established by Marathon Corporation, Menasha, Wisconsin. Regional sales managers, appointed several months ago, will be in charge of these offices and will coordinate and direct all the company's field selling activities in their respective areas. Announcement of the opening of regional sales offices was made by A. W. Stompe, Marathon's general sales manager, who stated that the purpose of the move is to make field selling operations more efficient by providing, through regional supervision, close contact between the company's home office and its customers in varied branches of the food processing and food distributing business. Marathon has 95 field sales representatives in Bakery, Food Packaging, Stock Products and Specialty Packaging sections.

SANI-CERTIFIED Milk Trailer Tanks, Fully Insulated With Stainless Steel Inner Tank Now Being Used By South American Dairies.

certified DAIRY EQUIPMENT

Milk Storage tanks
Truck tanks
Trailer tanks
Receiving vats
Weigh cans
Hot wells
Ice Cream mix tanks
Cooling vats
Pasteurizers
Cream coolers
Hoppers
General purpose tanks
Special Equipment

STAINLESS & STEEL PRODUCTS COMPANY ST. PAUL 4, MINNESOTA

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NEW YORK DAIRY INDUSTRY

New York's increasing importance as a dairy state is graphically depicted by the Milk Industry Foundation in a new survey.

New York's 1,355,000 cows produce $264,121,000 cash farm income for dairy farmers. The utilization of this milk shows the tremendous economic asset that dairying is to the State with a yearly production of 3,781,000,000 quarts.

Principal uses of this milk in addition to fresh milk were for making 20,915,000 pounds of creamery butter, 23,633,000 pounds of cheddar cheese and 46,549,000 gallons of ice cream.

A chart of the milk distributor's dollar shows 61.14 cents going to dairy farmers for whole milk, including transportation to plants; 19.44 cents for wages and salaries; 5.29 cents to plant and delivery supplies; 3.22 cents bottles, cans, cases; 1.29 other expenses; 1.98 insurance and depreciation; 3.98 taxes and licenses; .7 advertising; .98 officers' salaries; leaving a net of 1.98 cents representing less than 1/3 of a cent per quart of milk.

Milk production per cow is above prewar averages and demand for milk and dairy products is strong. As an economical food containing vital components of the diet, the ever-widening use of milk seems destined to bring about an increased scale of milk production on New York farms, the Foundation says.

●

SHEFFIELD PROMOTIONS

Louis Orr, Jr. has been appointed sales manager of the Home Service Sales Department of Sheffield Farms Company, Inc., and Howard A. Snyder has been named manager of the company's branch operation at Neck Road, Brooklyn, according to a recent announcement.

For a year previous to these appointments, Mr. Orr was manager of the Sheffield branch operation at Neck Road, Brooklyn, and Mr. Snyder was acting manager of the company's Orange, New Jersey branch.

Mr. Orr has been associated with Sheffield for eight years holding positions as canvasser, special salesman, wholesale sales supervisor, and branch superintendent. He spent two years in the Navy during the war and is now a resident of West Islip, N. Y.

Mr. Snyder joined the company in 1936 as a milkman at the Fulton Street, Brooklyn branch and later became a canvasser at the same location. He joined the Army in 1940 and in the succeeding five years rose from private to the rank of captain. He received his education at Adelphi Academy in Brooklyn, and plans to make his home in that borough.

They're Here to Stay

Large Majority of U. S. Dairy Farms Equipped With Milking Machines

Latest Census Figures Show

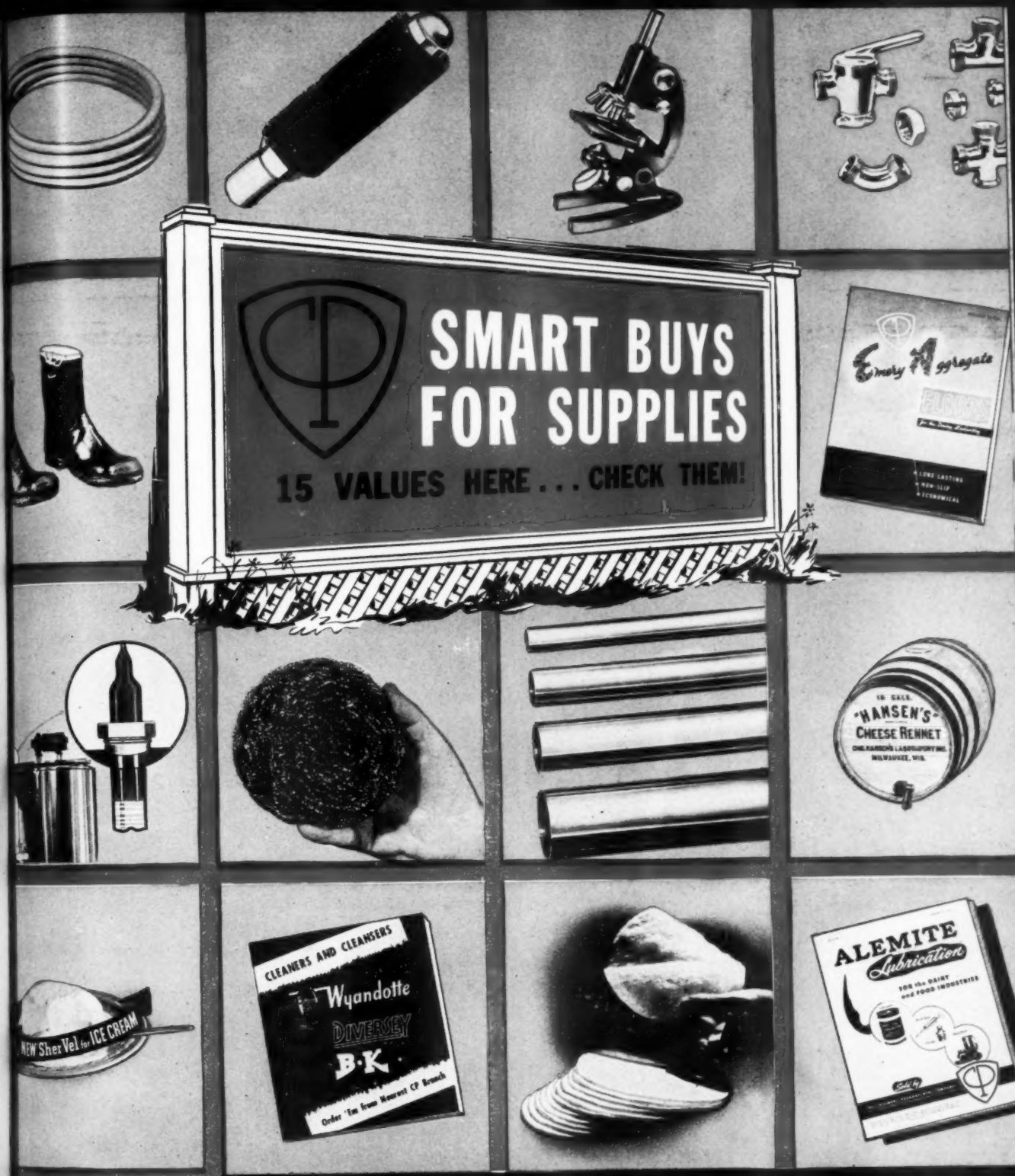
Rapid progress has been made in mechanising farming in recent years according to a report from the New York Statistical Service.

Milking on commercial dairy farms in New York is done mainly with milking machines. In May, 1947, they were used for about 73 percent of the herds included in the cross-section sample of farms which provide facts for the monthly Federal-State dairy farm report issued from the New York State Department of Agriculture and Markets. The increase has been rapid in recent years, the percentage of the reporting farms using these labor-saving devices in selected years having been: 1931- 23 percent; 1934- 17; 1940- 25; 1942- 44; 1944- 52; 1945- 62; 1947- 73. Because the machines are used more generally with the larger herds, the proportion of the cows milked by machine in the same years ranged from 30 percent of the total in 1931 to 82 percent in 1947.

In a recent tabulation made by the U. S. Bureau of the Census from a sample of farms enumerated in the 1945 Census of Agriculture, it is estimated that 40,792 New York farms used milking machines in that year. This is 52 percent of the 77,812 farms reporting the sale of dairy products in 1944. In that year, only nine percent of the farms with milking machines had herds with under 10 cows milked; 18 percent of the farms had 10 to 14 cows milked; 22 percent had 15 to 19 cows; 29 percent had 20 to 29 cows and 22 percent had 30 or over. Thus more than half of the farms with milking machines had herds ranging from 20 cows upward.

While the use of machines has greatly reduced the amount of time required for milking, it is often necessary to milk some cows entirely by hand. In March 1947, dairy reporters indicated that 61 percent of their machine-milked cows were "stripped" by hand. Moreover, efficient use of milkers requires skill and care in their use and maintenance.

The 1945 U. S. Census survey noted above indicated a total of 365,065 milking machines in the entire United States, with the greatest concentration of them among the larger herds. New York with 40,792 farms thus equipped had nearly 12 per cent of the national total. Wisconsin had 66,057 farms with these machines, Minnesota 37,913, Michigan 27,060, with Iowa, Ohio, Pennsylvania, Illinois and California next in line. The nine states mentioned included 72 percent of farms reporting these devices.



THE CREAMERY PACKAGE MFG. COMPANY

General and Export Offices: 1243 W. Washington Blvd., Chicago 7, Illinois

Sales Branches: Atlanta · Boston · Buffalo · Chicago · Dallas · Denver · Houston
Kansas City, Mo. · Los Angeles · Minneapolis · Nashville · New York · Omaha
Philadelphia · Portland, Ore. · St. Louis · Salt Lake City · San Francisco · Seattle
Toledo, Ohio · Waterloo, Ia.

CREAMERY PACKAGE MFG. CO. OF CANADA, LTD., 267 King St., West, Toronto 2, Ont.
THE CREAMERY PACKAGE MFG. COMPANY, LTD., Avery House, Clerkenwell Green, London E. C. 1.

XUM

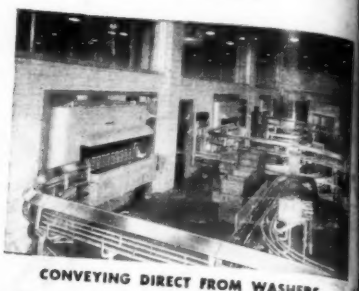
Dairylea saves 8 ways with a Mojonnier Engineered Conveyor System

1. ***SAVES FLOOR SPACE*** — the Mojonnier planned layout achieves maximum production over a given floor area.
2. ***SAVES HANDLING COSTS*** — by making it possible to handle a substantially larger product volume in same period of time.
3. ***SAVES TIME*** — measured, smooth work pace of conveyor coordinates production of all departments — eliminates waste motion.
4. ***SAVES CONTAINERS*** — Mojonnier's "Round-the-Curve" conveyor principle has practically eliminated bottle scratching and wear and tear on cases and cans.
5. ***SAVES LABOR*** — valuable man-hours formerly devoted to manual handling of cases and cans are now diverted to more productive efforts.
6. ***SAVES REFRIGERATION*** — containers in cold and hardening rooms go through case or can size doors, thus cutting down refrigeration seepage.
7. ***SAVES MAINTENANCE*** — sturdy, heavy duty construction saves maintenance costs through long, trouble-free operation.
8. ***"INDIVIDUALIZED" SAVINGS*** — because Mojonnier conveyors are custom-built to meet individual operations, many economies, not otherwise possible, are effected.

Hundreds of complete dairy plant installations, like Dairylea, attest the greater efficiency, greater dependability and greater economy of the Mojonnier *Dairy-Proved* Conveyor System. It will pay you to consult with the experienced Mojonnier engineer.

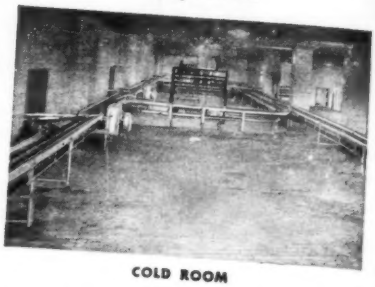
MOJONNIER BROS. CO. • 4601 WEST OHIO STREET • CHICAGO 44, ILLINOIS

Interior views showing Mojonnier Conveyors in Dairylea Plant, New York City

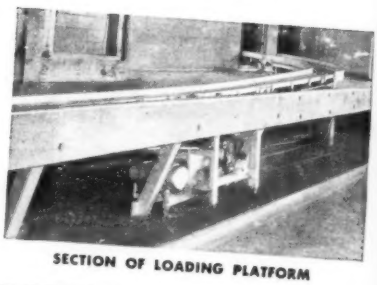


CONVEYING DIRECT FROM WASHERS

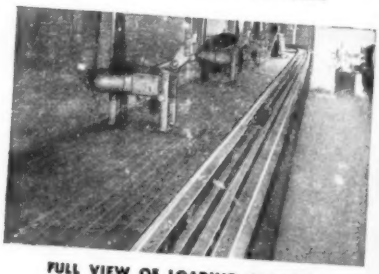
FILLING ROOM



COLD ROOM



SECTION OF LOADING PLATFORM



FULL VIEW OF LOADING PLATFORM

OTHER MOJONNIER ENGINEERED MILK PLANT EQUIPMENT

VACUUM PANS

COLD-WALL TANKS HORIZONTAL AND VERTICAL

TUBULAR HEAT EXCHANGERS

COUNTER-CURRENT VATS

COMPACT COOLERS

TUBULAR EVAPORATORS SINGLE, DOUBLE EFFECT